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All India Food Processors' Association



VOL.55 SEPTEMBER - OCTOBER 2001 No.5



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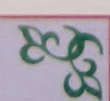
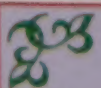
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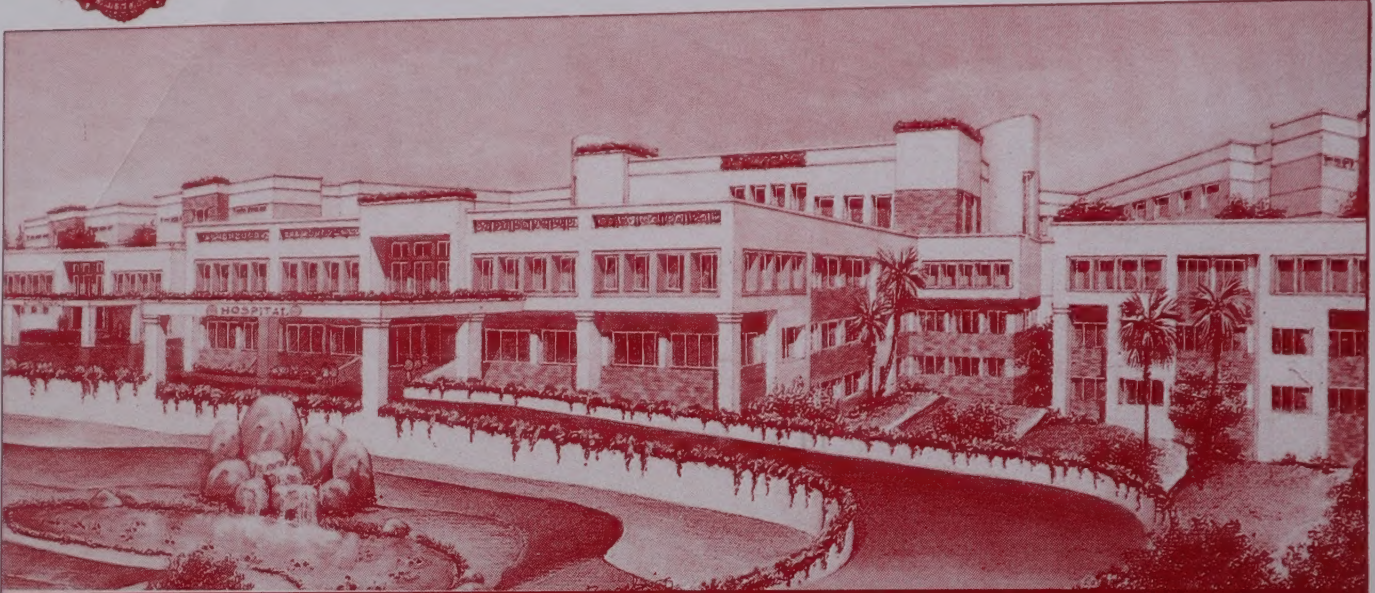
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ALL INDIA FOOD PROCESSORS' ASSOCIATION

Regd. Office: 206, Aurobindo Place, Hauz Khas, New Delhi - 110 016.

Ph : 6510860/6518848, Fax : 6510860

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Editorial

National Food Processing Policy

It is heartening to note that food processing sector has once again received a boost with the upgradation from a Department to an independent Ministry of Food Processing Industries in the Govt. of India. We welcome the new Hon'ble Union Minister for Food Processing Industries, Prof. Chamanlal Gupta who has a vast experience in various fields. AIFPA extends warm greetings to Prof. Gupta.

The Ministry has also now a new Secretary in Shri D. P. Tripathi, who took over sometime back. The former Secretary, Shri Omesh Saigal, after retirement, has now become the Chairman of National Task Force on Food Processing Industries. It is hoped that under the leadership of the new triumvirate, the Food Processing Sector will gain momentum and really become a "Sunrise industry".

The Ministry has prepared a National Food Processing Policy and also a Processed Food Development Act. These are being discussed at various fora to enable interaction with the industry. The main objective of these measures is to create a conducive environment for investment and rationalising the procedures for sustained growth of the Food Processing Industries in the country. At present, there is a plethora of food laws operated by different Departments/Ministries of the Govt., often at cross purposes. As a result, not only the growth of the Food Processing industries is stunted but they have also led to harassment of the processors sometimes. All these negative signals lead to discouragement of new entrepreneurship. Even though the Union Ministry of Food Processing Industries has been in existence for 13 years now, the flow of domestic and foreign investment has been rather too meagre.

The new Food Processing Policy has projected that the present meagre utilization of 2% of fruits and vegetables for processing should go up to 10% in the next 10 years for which a capital investment of Rs. 1,40,000 crores would be required so that all necessary infrastructure for post-harvest management like improved handling and packaging, cold stores, refrigerated transport, updated methods of processing, improved and efficient machinery etc. can be created. Such a development would generate vast employment potential and also ensure better return to the farmers for their produce. This is only one area of agriproduce and several other areas of farm produce need attention for development.

If the above goal is to be fulfilled, it is imperative that the existing plethora of food laws should be harmonised and a consolidated version like the proposed Processed Foods Development Act brought into force so that it projects really a development angle rather than being only regulatory as at present. Then only, the projected investment would flow and the goal achieved.

The new policy also envisages the establishment of a National Food Processing Development Authority, which will have greater freedom to implement the policies and projects.

Let us hope and wish that the new National Food Processing Policy and the Processed Food Development Act would be approved by the Cabinet and the parliament and become a reality in the not too distant future. The Food Processing Sector would then keep on rising like the bright sun and the benefits therefrom would flow to all sections - the farmers, processors, consumers & the country at large.

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25 सालों से माँ की पसन्द

ASSOCIATION NEWS

MINUTES OF THE 2ND EXECUTIVE COMMITTEE MEETING HELD AT MUMBAI ON 20.09.2001 AT 11.00 AM. IN THE BOARD ROOM OF MAIDC AT RAJAN HOUSE, 3RD FLOOR, PRABHADEVI, MUMBAI.

Shri Gokul Patnaik, President presided over the meeting and welcomed the members and thanked MAIDC for holding this meeting in their office. A bouquet was presented to Sh. Gokul Patnaik by Sh. A. M. Pandey, & to Sh. R. K. Zutshi, C.M.D., MAIDC welcome flowers were presented by Executive Secretary.

The members who could not attend were granted leave of absence.

The President briefed about the work done during this period and particularly mentioned about the following:-

1. Removal of Central Excise Duty from the processed food products and further efforts being made to ensure that this concession continues for atleast next five years.
2. Rationalisation of Food Laws.
3. The discussion in the Ministry of Food Processing Industries regarding adoption of Codex Standards in FPO & AIFPA's representation and anxiety about the Food Laws to be upgraded to match with the world standards.
4. The President met Dr. Asim Das Gupta, Hon'ble Minister of

Finance, Govt. of West Bengal who is the Chairman of the Committee of State Finance Ministers at Kolkata and requested that Sales Tax should be brought down to zero level and in the VAT regime the taxes should be rationalised at the level of 4%.

5. State regulations under the Essential Commodity Act & rules need to be re-looked and abolished.

President informed about the meeting with the New Minister, Prof. Chaman Lal Gupta and the briefing given to him about the present status of Food Processing Industries and he showed his great concern and requested the support of the Association to identify areas which need to be attended in short term and long term basis.

President then requested the members to discuss the agenda items :-

1. The minutes of the 1st Executive Committee Meeting held in New Delhi on 30th May 2001 were adopted.
2. Central Fruit Product Advisory Committee proposals for F.P.O. amendments based on suggestions received from

industries. Representations sent to Ministry of Food Processing Industries-Discussion and consideration.

President informed that the Ministry of Food Processing Industries after the meeting has sent to the Association comments on major issues of concern listed below :-

- (i) Concern for the imported products.
- (ii) Harmonisation of Food Laws under various enactments to help industry to produce world matching products.
- (iii) FPO needs to be updated to include innovations and product development.
- (iv) Codex Standards are not mandatory and need to be only a bench mark like BIS Standards.

There is a need to formulate standards to meet the requirement of agriculture & horticulture patterns matching the needs of technology inputs available.

Letters dated 28th June, 2001, 30th July, 2001 & 6th March, 2001 (appended).

3. Food Additives Sub-Committee of CCFS meeting held

on 26th June, 2001 - Briefing of the points taken up for discussion in the meeting.

President briefed about the discussions taken place in the 31st Meeting of Food Additives Sub-Committee (CCFS) held on 26th July, 2001.

4. Website of the Association and the members' advance listing at a nominal value of Rs. 500/-.

President showed on the lap top computer the website of the Association to the members, which was unanimously approved.

President requested the members for the advance listing and to take advantage of on-line members' directory and information provided as also various other services to help the growth of the Trade. (Circular letter no. 431/2001 dated 25th June, 2001 already published).

The following members present agreed to send their subscription of Rs. 500/- and the material for the web-site for advance listing.

1. Maharashtra Agro Industries Development Corporation Limited, Mumbai.
2. Petals Professional Services, Vadodara, Gujarat.
3. Madhav Agro Foods Pvt. Ltd, Baroda, Gujarat.
4. Transglobe Foods Ltd, Rajkot, Gujarat.
5. Chordia Food Products Ltd., Pune.

5. From the FPO Rule, the products like Sharbat (Syrups)

and Vinegars must be removed as done for other products like Jams etc. (Proposed by Mr. Kalvert).

6. Association must bring to urgent attention of the authorities as to why this discrimination for fruit products which are also manufactured as per FPO rule not removed from the list as other food products which have been removed. (Proposed by Mr. Kalvert).

The issue was deliberated in the meeting. However, in the absence of Mr. Kelvert or any clarification from him, it was decided that he may be asked to send further details since "JAM" is still a part of FPO and is very much regulated under FPO Rules.

7. List of outstanding -West Zone

List of outstanding of the West Zone was deliberated and President requested Zonal Chairman & other members to persuade the industry members to send their subscription without which it is difficult to run the activities of the Association.

President proposed that the Subscription pending for more than Rs. 5,000/-, the letters may be issued to the members under his signature.

8. Any other items with the permission of the Chair.

1. Budget & audited accounts.

The members were briefed about the financial position of the Association and after deliberations the Budget for 2001-2002 and accounts for 2000-2001 were adopted.

2. Purchase of Staff Car.

President briefed about the action taken to replace the old staff car and informed that the old car has been sold for Rs. 40,000/- and New Maruti 800 has been purchased through a Monthly Finance Scheme from Muthoot Leasing & Finance Ltd. An amount of Rs. 5, 344/- will be paid monthly to the Financiers & every year advance cheques duly signed will be given to them for withdrawing every month.

3. On the recommendation of the President, the Executive Committee approved the proposal of giving a fixed medical allowances of Rs. 150/- pm. to the permanent employees of the Association w.e.f. 1st Oct, 2001. Senior Executive pay scale proposed to be given to Sh. Shankar Sharma, Senior Executive Cum Accountant was discussed. It was decided that President & Vice-President may take decision on the Staff matters.

Sh. L.K.Shah said that President & Vice-President are competent to decide about staff matters; so it will be appropriate that all such decisions are taken internally. However, President sought the approval of the Executive Committee to authorise President and Vice -President to take such decisions.

4. It was brought to the notice of the Committee that the Municipal Corporation has sent a property tax bill for Rs. 1,21,123/- in respect of our office premises. The rateable value assessed is very high. In fact our society is working on no profit no loss basis as a charitable

organisation. Several representations have not yielded any results. It is advisable to hire a lawyer to contest this case and have the matter decided once for ever. Proposal was approved.

5. Office premises at Kolkata was purchased for Rs. 6,74,591/- in March, 1999. This place was considered for establishing a laboratory at Kolkata to make it useful and revenue earning. Now it is found that the place is not very

suitable for establishing a Laboratory. The Zonal Committee has been advised to dispose off the present premises and buy a place suitable for running a laboratory. Executive Committee noted the proposal.

6. Sh. Vijay Shah requested that in order of run State Chapters some budget allocation for meeting the local expenditure may be allowed. President agreed that like Zones, Chapters may also be allocated a small sum of Rs. 5,000/-. Executive

Committee approved the proposal to reimburse expenses upto Rs. 5000/ to the Chapters in each State. He however wanted the state activities should be co-ordinated with Zonal Chairman.

Meeting ended with thanks to the Chair.

Sh. R.K.Zutshi, Chairman, Western Zone invited members for lunch hosted by MAIDC.

(S.d) K.P.Sareen

Executive Secretary.

— — — — —

Association's letter dt-28.06.2001 addressed to :

Smt. Vibha Puri Das
Joint Secretary
Department of Food Processing Industries
Govt. Of India
Panchsheel Bhawan
New Delhi -110040

Sub : Deliberations for revision of FPO Standards.

Dear Madam,

We wish to refer to our discussions with your goodself held today regarding revision of FPO Standards.

We would like to confirm herewith the salient features of the deliberations.

A. A mechanism should be evolved in the Department of Food Processing Industries under your co-ordination where a team of experts devote themselves to develop the standards for products with proper scientific inputs and consideration of

Industry feasibility.

B. It is Important that " product description" and resulting "standards" are developed keeping in view the requirements of the country and the raw material limitations. The standards should be clear and brief.

C. The " revised FPO standards" will finally become a part of the Processed Foods Development Act. However, the "Food safety parameters" may be adopted by the Ministry of Health for implementation under PFA.

D. Our Association will extend full cooperation in the above process and also provide technical inputs for establishing product descriptions and the related standards.

E. As a part of the on going exercise our Association will undertake the work to enhance awareness among the manufacturers for establishing

Good Manufacturing Practices (which will subsequently lead to adoption of HACCP). We will work at the appropriate levels for preparation of literature, holding T.Q.M. Seminars, providing consultation and technical inputs to the Industry and finally assisting them to adopt HACCP . For this entire process, the Association will establish an MOU with the Department of Food Processing Industries.

F. The Association also takes this occasion to request you to kindly pursue with the Ministry of Health to provide necessary simplification - rationalisation in the implementation of PFA.

We hope you will kindly find the above in order.

Thanking you.

Yours faithfully.

(P.P.S. Dhillon)

CC to : President, Vice-President

— — — — —

Association's letter dt 30-7.2001 addressed to:

Mrs. Vibha Puri Das, IAS
Joint Secretary,
Department of Food Processing Industries,
Panchsheel Bhawan
Khelgaon Marg
New Delhi -110 049.

Dear Madam,

Please refer to our letter dated 28.06.2001 wherein we had raised various issues on the above subject and also confirmed that our Association will provide technical inputs for establishing suitable product description and related standards.

We circulated the draft standards to our members and subsequently held meeting of our Technical Advisory Committee.

Our comments are as follows :-

61 Specifications can be broadly segregated in:

- Juices, Squashes, Syrups, Cordials, Crushes, Nectars, Drinks, Waters etc.
- Dehydrated fruits & Vegetables & Powdered Soups.
- Synthetic Syrups and Vinegars.
- Thermally processed Fruits and Vegetables.
- Pulps, Purees, Pastes, Concentrates
- Sauces, Chutneys, Pickles etc.
- Frozen Fruit & Vegetable Products.

We analysed each specification for proposing the final draft from our side but we found that

- Product descriptions are not in line with the product. It is too elaborate and interferes in product specification.
- Specifications mentioned are indicative of proprietary products. There is no scope of industry innovation.
- Negative list, that is "what should not be added" is not clear.
- In Appendix 'F' the microbiological norms mentioned are not practical.

Due to above constraints we could not submit a modified draft for final approval.

Furthermore please note that currently majority of these products are not being manufactured in accordance with the proposed specifications. As such it is not possible to verify the proposed norms.

In view of above we propose that

- Each of these products may be manufactured as per proposed specifications either by industry or R& D Institute.
- Samples may be submitted along with details of Process, Raw Material Specification, Packing Material Specification, Processing parameters, Shelf life studies along with analysis and HACCP sheet.
- These samples to be looked into by a Technical Committee comprising of experts from industry, manufacturers of the specific product, R&D Institute, Food regulatory body.
- This Committee may lay down

and finalise the specification for adoption in FPO.

While on the subject we would like to once again request you to establish a proper mechanism for laying down food products specifications. Details of this system could be discussed by including all the food industry associations and R & D Institutes.

We also request your department to act as liasoning body for rationalising all the existing food laws & standards. Discussion may also be done with Ministry of Health to use PFA as Food Safety Act only and don't include the product specification in PFA act. You may also please discuss with them in particular regarding categorization of the nature of violations.

We hope you will find our above views in order.

With regards,

Yours faithfully
(P.P.S.Dhillon)
Chairman -TAC

AIFPA was associated with the "Task Force" on processed foods of the Ministry of Food Processing Industries. The sub group comprising of Shri Gokul Patnaik, President and Shri P.P.S.Dhillon, Past President finalised and submitted the report on "Financial and Fiscal Incentives for Food Processing Industries". These recommendations will be incorporated in the final report of the "Task Force" headed by Shri P. Murari.

NEWS ROUNDUP

NCL taps tamarind tang for food processing and profits

Traditional tamarind can be put to good use in processing jams, jellies, cream of tartar and pharmaceuticals and could save the country a few million dollars in imports. Pune's National Chemical Laboratory (NCL) now has a US patent to tell you how.

Overlooked for years as a cheap textile sizing agent or food pulp, the hardy Indian tamarind typically contains 13 per cent tartaric acid, five per cent pectin and 33 per cent fruit sugar, all of which are suitable for use as food additives. If isolated and recovered, these indigenous components can be used to break into a huge market, which is otherwise monopolised by imported tartaric acid and pectin extracted from grapes.

"At present, grapes are the only source for commercial production of tartaric acid. Six to seven years of a good harvest will be followed by two to three poor harvests," says patent author Dr M G Kulkarni, head of the polymer science engineering unit, in the chemical engineering division at NCL.

If marketed right, tamarind now has every chance to cater to country-wide demand with "value addition of two and half times of international

prices". The global market for tartaric acid is worth around \$3.30 million, and for pectin, there is a \$15 million US market at \$10-12 per kilo. India imports 1,200 tons of tartaric acid at a cost of Rs 50 crore. It is bought from wine manufacturers in Spain, US, France, Italy, Chile and Argentina.

The patent that has now been acquired protects a process of sequential isolation and recovery from tamarind pulp, of a natural mix of glucose and fructose, pectin which is used as thickener in jams, jellies, dairy products and pharmaceutical industries and potassium bitartrate, widely used as cream of tartar.

"Tamarind definitely makes commercial sense, the tree needs virtually no maintenance. No economically viable synthetic routines exist to recover tartaric acid and tartarates from tamarind pulp. Our process is traditional with no chemical enrichments," says Kulkarni.

Indian Express

29-6-2001



Cookie Man India on franchisee hunt

Cookie Man India, the Chennai based joint venture of the Australian Cookie Man, has drawn up plans to reach out new markets and is now on a franchisee hunt.

The Director and Chief Cookie Taster, Cookie Man Mr John Lynch, said Cookie Man. had been one of the most successful franchisee companies in Australia for more than 50 years. After opening two fresh baked cookie shops in Chennai, the company has embarked on a move to reach out markets through a franchisee partner model.

The Managing Director, Cookie Man India, Mr Chandra Sekaran, said, 'Our Australian Joint venture partner has a track record of helping individual owner-operators build successful retail businesses that are handed down from father to son. We are using the same business model in India.'

Mr Lynch said the Cookie Man product line was unique. "You cannot find better fresh baked cookies in India anywhere. Our super Cookie Line is a sell out in the Chennai shops. With a huge potential in the Indian market place, we plan to initially cover Hyderabad, Bangalore, Kochi, Coimbatore and gradually extend to the western and northern regions".

"The Cookie Man franchisee programme is unique. There are many franchisee choices in India such as pizza, fast food, bowling alleys, and clothing stores, but the Cookie Man franchisee model is different. We take the partnership approach to build a long-term

business with each owner operator. Backed by a successful model in Australia, we also help in brand building exercise with the franchisee centres," Mr Lynch said.

"Our selection process is designed to ensure that only those that are most likely to succeed get to become franchisees. We ensure that the franchisee partner gives his best so that the product retains its distinct identity backed by commitment to succeed," he said.

Business Line

30.06.2001



Good export potential for Paprika

Paprika is a product derived from high colour (carotenoids) and low pungent (capsaicin) chillis grown commercially in Spain, Portugal and Mexico.

The organic colour pigments from Paprika (Capsanthin, capsorublin, beta-carotene, cryptoxanthin, Zeaxanthin, etc.) have uses in pharmaceutical, cosmetic, textile, beverages, meat and poultry food and confectionery industries.

The ban on use of synthetic dyes in these industries in European Union Countries has boosted the requirement for paprika-based oleoresins.

The global demand for paprika oleoresin (8-12 per cent of dry pod weight) is more than 30, 000 tonnes and is presently met by Hungarian, Spanish, Moroccan, Bulgarian, American, Yugoslavian, Czechoslovakian, Romanian and Portuguese growers.

"Byadagi" chillis grown in Dharwad in Karnataka and tomato chillis grown in Warangal in Andhra Pradesh have qualities similar to paprikas in Spain and Hungary. The major growing areas of *Byadagi* are Dharwad, Belgaum, Bellary and Raichur in Karnataka, Rayalseema, Guntur, Vijayawada and Kammam in Andhra Pradesh and Nagpur, Kolhapur, Solapur, Sangli and Satara in Maharashtra.

Spices trade visualises an export potential of 5000-6000 tonnes of paprika oleoresin from India, provided suitable varieties and growing technologies are made available to growers.

Technology for oleoresin extraction is available with Central Food Technological Research Institute, Mysore and is now being put to use by nearly 40 Kochi-Based industrial units, 9 Karnataka units and 7 Andhra Pradesh firms.

The Technology upgradation for efficient extraction of carotenoids from dried pods is being carried out by the Bhabha Atomic Research Centre, Trombay, and at Nova Agri-Tech Ltd., at Hyderabad.

Indian Food Industry May-June 2001



Fruit juice for health

The trend towards "wellness" and heightened health consciousness in major markets is leading to a growth in demand for fruit juices offering health benefits. Consumers opting for healthier lifestyles are increasingly substituting alcohol with non-

alcoholic beverages such as fruit juices.

Germany and US lead the way

Out of the seven countries surveyed in Euromonitor's recent report the US emerged as the largest market for fruit juices in volume and value terms in 1999, reflecting the country's large population and the increasingly important role played by these products in the American beverage diet.

In terms of per capita consumption, German consumers recorded the highest retail consumption of fruit juices, at over 37 litres, about five litres ahead of second-placed American consumers, and over four times the level of consumption by the Italians.

In the same year, the reverse was seen in terms of per capita spending with US consumers recording the highest spending in per capita terms and German consumers in second place.

Small market in the Mediterranean

The fruit juice markets in Spain and Italy is relatively small in comparison with other key markets. Due to abundance and widespread availability of raw material in Southern Europe, the Italians and Spaniards prefer to consume freshly squeezed, homemade fruit juices such as orange juice.

In keeping with the trend seen in other Western nations, consumers in both countries have become increasingly health-conscious and due to the pressures of a modern lifestyle are demanding convenient,

industrially-prepared fruit juices and products enriched with vitamins and minerals. These demands are boosting the market, in particular the 100% juice sector.

In 1999, manufacturers, who targeted consumers by further emphasising the health benefits of juices, attained value sales growth. Their success was achieved by utilising a combination of heavy advertising and promotion, which accompanied product launches of juices enriched with vitamins and minerals.

In Italy, manufacturers have widened the adult consumer base by introducing various pack sizes, with larger sizes more practical for consumption throughout the day. Latest developments include the "cheerpack" an innovative packaging format made of different materials, including plastic and aluminium, with a screw cap and straw spout. This light unbreakable packaging is targeted at adults and is considered to be very practical for outdoor consumption.

Consumers demand 100 per cent juice.

100% juice forms the largest sector in most key markets with reconstituted juices being the dominant sub sector in six of the seven key markets in both volume and value terms. Despite competition from other more dynamic and innovative drinks categories in Japan in 1999, value growth came from 100% freshly squeezed fruit juice blends with specific health benefits. This trend filtered through to the retail industry from the booming

western-style café and juice bar culture.

In the same year, reconstituted Juice claimed over half of volume sales in France, Spain, the UK and the US. It's convenience and long-life properties make it a stand-by product in many homes. Budget conscious families who appreciate the lower prices of long-life products compared to chilled products buy in bulk for children's packed lunches and snack meals. Chilled, premium not from concentrate, juices registered the most dynamic growth in 100% juices, as they are more closely associated with improved health.

Cofit Finder

Karnataka food processing policy soon

The Karnataka Food Processing policy, will be announced in a month's time, said the Minister for Agriculture, Mr T.B. Jayachandra. The policy has been in the making for over two years.

Mr Jayachandra also said that the State was holding a national maize mela in July to encourage consumption of the grain. A national-level agricultural implements exhibition has also been planned for August 1.

Around 80 companies in India have shown interest in the exhibition. Mr Jayachandra, who is just back from a trip to China, has also invited equipment manufacturers from that country, "China has a high degree of farm mechanisation and we can

learn from them," he said

China's agriculture is highly advanced and 58 per cent of the land is under hybrid seeds, he said. "China is well geared to meet the challenges of the WTO when it joins the organisation. They are prepared not to import a single grain," he warned.

When China joins the WTO, India will be the first country to be affected, he predicated.

Business Line 30.6.2001

Clarifications sought on BIS Mark by Bottled Water Manufacturers

Government notification making the BIS mark mandatory on all packaged water has prompted the manufacturers to make representation to the Department of Food Processing, seeking clarifications on the issue and the Ministry of Food Processing would, in turn, take up the case with the Ministries of Health and Consumer Affairs.

The big guns of the packaged water industry, like Bisleris, Cokes, Pepsis and Nestles are believed to be part of the representation that seeks clarification on issues including the fate of non-ISI marked bottled water in the markets after March 29, when the notification period lapses. Bottled water has a shelf life of six months and there will be stocks in the market without ISI mark after the notification period.

It was pointed out that the royalty that had to be paid for the

Bureau of Indian Standards certification mark was 10 times more than for baby food. MNC beverage companies admitted that while such rates could be met by companies with deep pockets, it would be crippling for smaller domestic water manufacturers. The royalty to be paid was either Rs. 1.49 lakh per annum or Rs. 25 per 1,000 litres, whichever was relevant to the company. The notification makes it mandatory for the packages to be transparent and clear; however, the materials allowed by the notification, this polyethylene and polycarbonate, are not transparent and hence it is contradictory.

Cofit Finder

Radiation processing of spices suspended

The Atomic Energy Regulatory Board (AERB) has withdrawn the certificate of approval for the demonstration plant used for radiation processing of spices at Vashi in New Mumbai, this metropolis' twin city. This has resulted in temporary suspension of the plant's operation.

A team of AERB inspectors had found that certain safety alarm devices were found not to be all right. "But these lapses had not compromised the public safety in any way," said Dr. K.S. Parthasarathy, secretary of the Board.

The plant, set up by the Board of Radiation and Isotope Technology (BRIT), is being used for irradiating onion powder meant for export for enhancing product's shelf life. The

Department of Atomic Energy has been promoting irradiation of food products for long time preservation and that of medical supplies for sterilisation.

The Hindu

5.7.2001

Rs 31 cr wheat gluten unit to be set up in Punjab

The Punjab Project Approval Board has approved setting up of a Rs 31 crore project for production of wheat gluten and starch at Pathankot and a Rs 15.10 crore food park at Fatehgarh Sahib.

The board meeting, which was presided over by Chief Minister Prakash Singh Badal in Chandigarh yesterday, also approved few other projects, says a government release.

The park, to be set up by the Punjab Agro Industries Corporation, will supply nursery material to 1,000 contract farmers and cover 5,000 acres in a 50 km radius of Fatehgarh Sahib. The food park will produce 50, 000 tonnes of vegetables. A Rs 21 crore project for cellulose and silica production was also approved, it added.

Business Standard

05.06.2001

Marketfed launches value-added products

The Kerala state co-operative marketing federation (Marketfed) has forayed into the value-added products market with packaged coconut water, milk and desserts and spices.

"Marketfed has brought out products such as coconut water, milk, desserts in flavours such as chocolate, strawberry, vanilla and mango; coconut powder, oil and a whole range of spices and spice mixes. The federation plans to launch these products in all metros soon," Jose Kuttiyani, chairman of Marketfed told reporters here.

The products were launched in Delhi by Chief Minister Sheila Dikshit. The products will be marketed through all the Mother Dairy outlets across the city apart from the retail outlets of the National Agricultural Cooperative Marketing Federation of India (Nafed) and the Kendriya Bhandars.

"The entire range of products will be available at all the 1,000 Mother Dairy outlets in Delhi apart from milk outlets in Kolkata and Mumbai. In Bangalore and Chennai, we are tying up with a departmental store to sell these products," Kuttiyani said.

All the products are priced reasonable and the cooperative hopes to earn a revenue of Rs 50 lakh per month from its sales, Kuttiyani said.

Business Standard

05.06.2001

Four food parks for Haryana

The Haryana Government has proceeded on formulating a food processing policy failing to rope in bankers for projects in the sector, a bane in realising the potential of the industry in the state.

The state here today began to gather inputs for the policy from experts, industry, bankers and the Central Government by organising a seminar co-chaired by former Union Minister and Economist Charanjit Chana and Chairman, Food and Agriculture Sub-Committee of CII (Northern region), Gokul Patnaik.

The seminar on "Food processing in Haryana - opportunities and policy initiatives" was inaugurated by Haryana Chief Minister Om Prakash Chautala who underlined the need to maximise gains for farmers through food processing which can stop the decay of perishables and enhance the holding capacity of the farmer.

The Chief Minister announced that the state would set up four food parks in Rewari, Jhajjar, Dabwali and Saha (near Yamunanagar) providing to push the growth of the food processing industry and become catalyst.

Deputy Secretary of Food Processing Ministry, A.K. Goyal asked the state government to set up a nodal agency in the form of a directorate for matters related to food processing and informed it about the policy encouragements to the entrepreneurs, state government and PSUs.

Mr Goyal asked the state government to come up with projects in the sector for which the Central Government was eager to help with sufficient funds adding that the Union Government will now provide Rs 4 crore for each food park, instead of the private parties.

Vice-President of the Pepsico India Holding Ltd, Kevin Parker told the government to learn from the experience of the company in contract farming which has a spread-effect on the economy of Punjab and is now being replicated in Haryana and has mutually benefited the company and the farmers.

The Dutch agro-financing major ranked 15th in the world Rabo's director, food and agri-business, Rajesh K. Srivastava expressing apprehensions of financier to processing projects, said the policy must go into forming a logistic management company on the pattern of Gujarat, should start accepting ware housing bills of exchange, create agri-service centres in efficient hands and offered finances for these facilities.

The policy makers were asked to create cold chains, value chains, backward and forward linkages, international food standards, R and D at the state level, packaging facilities, change in the Prevention of Food Adulteration Act, tapping the Indian technology of preservation through radiation developed by the Bhaba Atomic Energy Institute.

Tribune

4.7.2001

Integrated Food Processing Act soon

Union ministry of food processing is contemplating to enact an Integrated Processed Food Development Act on the pattern of United Kingdom to remove duplicity and variations in existing acts governing food processing sector.

Union minister of state for food processing Thakur Chaoba Singh made the announcement while speaking at the one-day conference on 'opportunities for the food and agro industries in Jammu and Kashmir', organised by the Confederation of Indian industry (CII) in collaboration with the Jammu and Kashmir. State Industrial Development Corporation (SIDCO) here on Monday.

Union minister of state for commerce and industries, Omar Abdullah, union secretary for food processing DP Tripathi, Jammu and Kashmir minister for industries and commerce Sheikh Mustafa Kamaal were also present at the conference. Singh said at present there was multiplicity of acts, which was retarding the growth of processed food sector. The new act would be developmental rather than regulatory, he further said.

The assistance limit in Jammu and Kashmir would be 33 per cent of the capital cost subject to upper limit of Rs 75 lakhs. The minister said : "Such incentives would encourage the entrepreneurs."

He said that the Centre has already exempted central excise tax on processed food products and pointed out that Jammu and Kashmir can get best dividends from the food processing industry like New Zealand and Norway as the state has abundant potential for horticulture products.

Omar Abdullah called upon the local unemployed youth to avail the vast opportunities thrown open by setting up of the food processing park in the valley.

He said : "Since common facilities like cold store, effluent treatment plant, quality control laboratories, work housing facilities, internet connectivity, are available to entrepreneurs under one roof in the park, there is extensive scope for first generation entrepreneurs to set up their units even with meagre investment".

Newstime

Curry Queen has more for your taste buds

The co-owner of British curry giant Patak Spices which helped bring tastes of the Indian subcontinent into Western kitchens says she has more flavours up her sleeve.

"This is just the tip of the iceberg. I haven't touched the variety of south Indian flavours and other regions of India," said Meena Patak, who runs the \$50-million (\$70.68 million) a year business with her husband Kirit.

The company, based in Lancashire, England, sells a broad range of curry bases. Packaged soups, frozen ready meals, breads and other products. Patak, whose firm is one of Britain's biggest food exporters, was nicknamed by the British press the "Original Spice Girl".

The company was launched 45 years ago by Patak's late father-in-law, Lakhubhai Patak, who arrived in Britain from East Africa with just £5 in his pocket. From a small London shop selling pickles, Indian

savouries and sweets typically made in western India's Gujarati households, business grew, at first by word of mouth.

"When my father in law was at the helm in 1980, turnover was about £4 million," the Indian-born Patak, 45, said, But business exploded in 1994.

Fastest growing brand: "We grew by 93 per cent in 1994 and ever since we are the fastest growing brand (in Britain and Australia) against all sectors like soaps, toothpastes and other commodities," she said in a speech to women entrepreneurs during a two-day visit to India's commercial capital, Mumbai, recently.

With 150 curry flavours and a variety of snacks selling under the Patak's label, the company's products are now in stores in Britain, Australis, the US, Canada and Netherlands. It has two factories in Lancashire and three in Scotland.

Patak uses a wide variety of spices and seasonings largely imported from India which she blends to make tasty flavours.

She said her mission has been to change the way Indian curry is eaten in Britain and elsewhere.

"What was understood as curry some years back was anything spicy, watery and with vegetables," said Patak, who two weeks ago was made a member of the Order of the British Empire by Queen Elizabeth for her contributions to the food industry.

After a drive to educate people at supermarkets, Patak, who is

trained in food technology in Bombay, now feels consumers in Britain and other countries 'are getting used to the original curry flavours'.

Economic Times

2.7.2001

Foreign chocolates, juices crowd Indian shelves

The market for imported carbonated drinks, fruit juices and chocolates is hotting up.

Australian preserved-foods and fruit and carbonated drinks major Golden Circle is leaving no stone unturned to garner a large share of the growing Indian market for items such as corn kernels, to begin with.

Droste of Holland and Lindt of Switzerland, too, have resolved not to disappoint those with a sweet tooth.

The three companies have been steadily introducing their range of products through a network of around 25 importer-distributors across the country.

Besides canned corn kernels, Golden Circle has already introduced 19 varieties of fruit and carbonated drinks, including six varieties for the health conscious.

Priced at Rs 33 per 375 ml can, the choice ranges from lemonade to ginger ale, tropical punch, creaming soda, diet orange and diet lemon.

Droste, Holland's biggest chocolate maker, is offering 22 varieties of chocolates from pack sizes of 100g to gift boxes of up to 250g.

Global favourite Lindt has already introduced about 45 different varieties of chocolates packed in slabs and gift boxes across the country.

According to Mr Mudit Bagla, Director of Mudit Exports Pvt Ltd, an importer and all-India distributor of Golden Circle, Droste and Lindt, the chocolates are available at all major cities and towns and are targeted at the high-income group.

"Earlier, anything imported would sell. Today, the customer has become very choosy and discernible. He is willing to pay that little extra for the sake of quality," Mr Bagla told Business line.

He said it would be difficult to quantify the exact quantum of demand since the grey market with regard to imported carbonated juices and preserved food products was hyper active.

Among other things, the 63 per cent import duty on chocolates was fuelling greymarket operations.

According to him total sales of Golden Circle, Droste and Lindt products was expected to surpass Rs 15 crore in the current fiscal, up from Rs 7 crore recorded in 2000-2001.

Business Line

7.7.2001

Haryana to set up 4 food parks

The government of Haryana has decided to set up four food parks at Dhabwali, Jhajjar, Narwana and Saha for which the Central government has already given its approval.

In order to provide benefit to the farmers and consumers the state government had been thinking of strategies for quite some time. The chief minister while inaugurating a seminar on food processing industry in Haryana said that farmers should be apprised about World Trade Organisation in clear terms. He expressed concern over the import of flowers, vegetables and fruits into the country and wondered why the same could not be exported from India to other countries.

He said as a result of the reduction in the market fee and provision of many other incentives to the farmers the state government had been able to contribute 65 lakh tonnes of wheat to the central pool.

Interestingly, he said, the farmers of Delhi had sold their wheat in mandis of Haryana.

Earlier, in his keynote address, chairman of food and agriculture sub-committee of CII (NR), Gokul Patnaik appreciated the initiatives taken by the Haryana government to organise such a seminar to discuss various issues.

He said that food processing would add value to the products and generate employment opportunities especially in rural areas.

Economic Times

3.7.2001

UP announces export-subsidy package for mangoes

Uttar Pradesh, the largest producer, has become the first state in the country to announce a

separate policy for encouraging exports of mango. The state government has also announced a subsidy package.

Speaking to The Financial Express, the chairman of DTTDC, Dr Roshan Lal said this will be the 13th Mango Festival in succession with a new focus on promoting exports and offer an exposure for the thriving mango industry in the country. The principal secretary of the UP government, Rai Singh said that in the current season the state had bumper mango crop amounting to 42 lakh tonnes. He said that the exportable surplus will be about five lakh tonne in the current year. The state government is keen to export maximum quantity of quality mangoes to the Middle East, Europe and US. The current export strategy launched by the state government is aimed at popularising UP mango variety brands.

Giving details of the export policy, Mr Singh said that the state government would provide subsidy of Rs 5 per kg for brand promoting on the quantity of mango exported. He said that the state government will also provide 25 per cent air freight subsidy or Rs 20 per kg on air freight whichever is lower. He assured that mango exporters would have no difficulty in sourcing finance from commercial banks as there is a refinance scheme from Nabard and the Exim Bank of India. The state government has already worked out modalities for credit from banks. Besides, the exporters can avail of the facilities like washing, grading, per-cooling and packaging existing in the Lucknow airport from where

it can be exported. The state government has a special subsidy scheme for packaging.

Mr Singh further stated that the exporters need not go from pillar to post for obtaining phytosanitary certificates for disease-free mangoes as necessary arrangements for testing has been made in Lucknow. Foolproof arrangements for rail transporting of mango from Lucknow to Delhi and Mumbai and air cargo from Lucknow, Delhi and Mumbai are also being worked out with the help of railways and airline authorities.

Financial Express

7.7.2001

APTICO- nodal agency for food processing

The State Government has decided to nominate the Andhra Pradesh Industrial and Technical Consultancy Organisation Ltd (APITCO) as the nodal agency for the promotion of food processing units, Mr T. Gopala Rao, Principal Secretary and Commissioner for Industrial Promotion, said on Saturday.

Addressing a meeting marking the silver jubilee celebrations of APITCO, he said 83 major projects, with an investment component of Rs 18,000 crore, were being finalised in the State.

In the context of the WTO regime and the removal of quantitative restrictions on imports, there was a need to encourage small scale units, he said. He urged APITCO to take up the challenging job of sustaining them.

Mr Rao said the Government had decided to give incentives to SSI units for upgradation of skills in training and technology.

Dr Dharani P. Sinha, President of Cosmode Consultants Ltd said in the changed economic scenario, business leadership was repositioning itself for integrating its private interest with that of the community. In the last decade, human capital became the main source of wealth generation and customised production had come to stay. In the future also, human capital would be the prime mover of organisations, he added.

Mr S.R.S Ayyar, Chairman of APITCO, said the organisation was working on building brand equity and developing micro enterprises in other States, besides South Africa and Botswana.

Mr S. Srinivasa Rao, Managing Director of APITCO, highlighted the activities of the organisation and said they were market-driven. Its services, including technology transfer, were made available at the doorsteps of prospective beneficiaries.

The Business Line

8.8.2001

Processed food importers in quandary over rules

Importers of processed food products are in a piquant situation, as conforming to one set of regulations brings them under the purview of other regulations, resulting in levy of additional duties.

Under the Prevention of Food and Adulteration Act (PFA) and the Weights and Measures Act, the imported products will have to show on tin labels the importers address and the maximum retail price (MRP). This labelling is a prerequisite to marketing, and is done either at the point of origin or before the goods are cleared from the Customs.

However, when the importers provide these details on the retail packs, they come under the purview of the Excise Tariff Act, 1985, under which they attract excise duty of 16 per cent normally levied on manufacturers.

Under this Act "labelling or relabelling of containers and repacking from bulk packs to retail packs or the adoption of any other treatment to render the product marketable to the consumer shall amount to manufacture."

For instance a leading importer of fresh fruit juices in Chennai, in accordance with the PFA and Weights and Measures regulation provided the maximum retail price (MRP) and address on the imported retail packs.

However, the excise authorities have recently issued a summons and sought an explanation as to why the imported goods should not attract excise duty.

The importer brings in the product in retail packs directly-he does not repack them. He still has to affix the MRP and address sticker to the products, to conform to the provisions of the PFA and Weights and Measures Act. However, by affixing the sticker, he renders the goods excisable.

According to sources, importers of a wide range of goods are in a bind, as the excise authorities have issued a spate of summons.

Further, importers pointed out that since excise duty has been lifted from March 1, the authorities have issued the summons in connection with the period prior to the lifting of excise duties.

Sources said that the importers have explained to the excise authorities that during that period, they paid a countervailing duty (CVD) of 16 per cent, the equivalent of excise duty. An official response from the excise authorities, is awaited.

The Business Line

8.8.2001

Ready-to-eat food holds a lot of promise

Imagine having to come home after a hard day and slogging in the kitchen to make something delicious for the family. The modern Indian home maker is pressed for time having to live up to the role of a New Age woman. Helping her in this new avatar are firms like MTR and Tasty Bite which offer ready - to - serve meals available at affordable prices ranging between Rs 30 and Rs 70.

"The Indian market for ready-to-serve food has a huge revenue potential of Rs 150 crores over the next three years. Though the industry is still in infancy, the ready-to-eat concept is slowly gaining acceptance among the urban population. "We cater to the entire

spectrum of the Indian palate. Currently, Tasty Bite enjoys a 60 per cent market share having notched a net profit of Rs 134.25 lakh for fiscal 2001", Ravi Nigam. President, Tasty Bite Eatables Ltd told The Asian Age.

The company which was established in 1989 has a manufacturing base in Pune. Tasty Bite, till recently, focussed on satisfying demand of the US market. It has expanded its distribution base to cover 17 US states, "The US market is larger and more aware of the benefits of the quick fix meal," says Mr Nigam.

Asian Age

9.7.2001

AQA in pact with FoodCert

American Quality Assessors India Pvt Ltd (AQA) a quality assessment and certification services company functioning under the aegis of the US-based AQA, has entered into an exclusive arrangement with Food Cert-NI, the Netherlands-based quality certification firm specialising in agro sector, food and allied processing industry, for carrying out assessments and registrations in India on Hazard Analysis Critical Control Point (HACCP) and hygienic codes of practices of European standards.

Addressing presspersons here, the AQA India Director, Mr Srihari Kotela, said hygienic codes of practices (European Standard EN 45011) was being introduced in India for the first time.

FoodCert-NI, was the first certification body in the world accredited by the Dutch Council for Accreditation in 1996 for HACCP systems certification.

It also received exclusive accreditation from the Dutch Council for certification of Government-approved hygiene codes for various sectors which enabled supermarkets, wholesalers, retailers, hotels, restaurants, health sector, bakeries, butcheries, auction houses, sorting and packing stations, importers and exporters and fresh produce growers to take the benefit of certification.

Business Line

10.7.2001

Aussies keen on investing in India

Major Australian companies are closely looking at investment opportunities in India in segments like healthcare, IT, food processing, mining and energy. While subsidiaries and JVs are being planned, Australian companies are eyeing technology partnerships in different sectors.

Speaking at a press-meet, Ms Elizabeth Sullivan, Trade commissioner, Austrade-Australian government's trade and investment agency-who has recently assumed charge in India, said, "there are at least 5 Australian MNCs which would foray into India every year".

"India is a major trading partner for us and trade growth with India is increasing at a very fast rate, making it the 12th largest export destination for us," she added.

Ms Sullivan said that quite a few Australian healthcare companies are in advanced stages of negotiations with Indian partners for setting up private hospitals, diagnostic centres and also provide expertise for hospital management.

"Some of the Australian IT companies are also keen to set base here and initial investment for each would be nearly Australian \$1 million," Ms Sullivan added.

Dairy products, fresh fruits and processed food are also big areas for Australia's exports to India. Ms Sullivan indicated that with quite a few food technology parks being set up in India, Austrade saw opportunities for a lot of speciality cheese, canned fruits, juices, and other food product exports from Australia.

Other focus areas are technology and equipment transfer in sectors like mining, waste management and telecommunications.

Australia exported \$1.89 billion worth of goods and services to India in 1998-99. Foreign investment flow from Australia to India recently was Rs 2,638 crore.

Economic Times 14.7.2001

Sweet days ahead for AP mango clusters

The cluster approach adopted by the Andhra Pradesh Industrial and Technical Consultancy Organisation Ltd (APITCO) for modernisation of 37 mango processing units in Chittoor district in the state has started yielding

results with the units coming under a federation to upgrade their technologies and adopt better management practices for higher returns.

Thanks to the unremitting efforts of Mr. S. Srinivasa Rao, Managing Director of APITCO, and Mr LD Prasad, its Chief Consultant in the last three years, the units are convinced that they have a prosperous future by adopting the solutions offered by APITCO which facilitate the stretching of their seasonal operations nearly by 100 per cent through better utilisation of capacity.

Mr Prasad told *Business Line* that except three medium-scale units, the remaining 34 units were in the SSI sector. Most of them were located in a radius of 25 km and had unwittingly formed a cluster on the strength of factors such as availability of raw material, skilled labour and proximity to markets in Bangalore and Chennai for export.

They processed mostly mango pulp and some of them also handle guava, papaya and tomato. While some have adopted new technologies, some others are run on old technologies.

Almost all units work on contract basis for exporting firms and the mangoes are supplied to them from Cuddapath district in Andhra Pradesh and from North Arcot and Dharmapuri districts in Tamil Nadu.

Barring the *totapuri* and *alfonso* mangoes, the units do not process the other varieties. They get *alfonso* variety from the Ratnagiri belt in Maharashtra. While their

technologies are similar, their operations are seasonal. Some of them processed tamarind during off season and the rest remain idle for nearly 9 months for want of orders. The units process 60,000 tonnes of mangoes in the cluster annually which in monetary terms is worth Rs 180 crores. Of the 60,000 tonnes, 40,000 tonnes are exported.

To ensure that the units work with maximum efficiency for at least 100 more days than the seasonal three-month operations. APITCO made a detailed study of the available infrastructure, skills and marketing efforts of the units and identified the critical areas which need focus and the common requirements of the units.

One major finding of the study was the wastage of raw material up to 26 per cent due to improper handling at different stages. To lessen the losses through improved handling and processing techniques that save costs and energy, APITCO suggested the adoption of new crop harvesting techniques by farmers at orchid level, use of crates for keeping mangoes, and transporting them directly to the processing units.

Units that were unable to upgrade their technologies were asked to take it up in phases and improve the product quality. Loans have been arranged from financial bodies for technology up-gradation.

The National Horticultural Board had come forward to offer financial aid to farmers for the purchase of crates.

To keep the units going during off season, APITCO has evolved

plans for them to process downstream products such as mango bar and tamarind.

They were also helped to promote a common brand to market their product. The '7 Hills' mango drink which is similar to 'Maaza' is a common brand product of the cluster.

For waste management, APITCO has suggested the setting up of a common effluent treatment plant for liquid waste with the help of the Agricultural and Processed Food Products Export Development Authority (APEDA).

The solid waste comprising stone, fibre and skin amounted to nearly 30,000 tonnes. Several methods have been devised to put the waste to good use. While the skin can be processed and used as cattle feed, oil can be extracted from the kernel (inside the stone).

A waste processing unit has been set up on commercial basis at a cost of Rs 1 crore with financial assistance from the Department of Food Processing (DFP).

Mr Prasad said a database on all aspects of the cluster was being prepared. A common testing facility was also coming up with the support of the DFP and the federation.

With the new techniques becoming fully operational, there was the possibility of bringing down the losses to 15 per cent and that would add up to the revenues of the mango cluster.

Business Line 14.7.2001

Value-added maize products from 'Agro Corn'

Karnataka State Agro Corn Products Ltd has just entered the retail market with value-added corn products, doing its bit towards increasing consumption of maize in the country.

Agro Corn recently launched maize-based products at the Maize mela in Bangalore. The attractively packaged products include maize grits for animal feed, maize flakes, breakfast food, instant upma, instant kesri bhat, biscuits, ready-to-eat maize puff and instant corn soup mix.

All the products are being marketed under the 'Gala' brand name, originally given to a range of fruit-based products from the Karnataka Agro Industries Corporation (KAIC). From April this year, Agro Corn has taken over the marketing of KAIG's Gala products too.

Agro Corn is also looking at strengthening its weakest link - marketing- by teaming up with distributors and dealers through out the country.

Currently, it is in talks with chains such as Janata Bazaars, Nilgiris and Food World to stock Gala on their shelves. The company also has proposals to setup kiosks to sell Gala products.

This year, maize products are expected to bring in business of "well over Rs 1 crore". Maize products still have to be popularised in India, but by 2002, they may

bring in as much a Rs 6 crore, said Mr R. Prakash, Managing Director of the company.

The bulk of revenues for the company comes in from the energy foods division. Energy foods are currently being supplied only to the Women and Child Welfare Department. This year, the company plans to launch it in the commercial market as well.

Agro Corn is also reducing staff through VRS schemes "for greater efficiency". Other plans include launching value added wheat products, and malted ragi using CFTRI technology.

The company ended the current financial year with profit of Rs 4 crore on a turnover of Rs 40 crore after years of losses.

Business Line 15.7.2001

Putting processed food on top shelf

For all those equating processed food with junk food, here's something to chew on. The Department of Food Processing Industries (DFPI) is embarking on an advertising blitzkrieg to bust the myth, associating processed food with fast food.

The generic campaigns, highlighting the unique selling proposition (USP) of processed foods, will seek to focus on the all-season availability of processed food, as against the seasonal limitations of fresh fruits and vegetables, DFPI sources told Business Line.

Consumers will now be enlightened on the health aspects of fruit juice or the benefits of protein-rich mushroom, for example, courtesy DFPI's propagands through the DAVP (Department of Audio Visual Publicity).

"Food processing is all about adding value, and so the campaigns would communicate the fact that one can have their favourite fruit or vegetable, even if it is off-season. The department will further seek to propagate that processed foods are also healthy," the source said.

DFPI sources pointed out that the need to undertake a proactive role to promote processed food was prompted by the fact that consumer demand for processed food was static.

"Unlike the developed markets, where processed food is popular, somehow in India, people have associated processed food with junk food and, thus, the demand seems to have stagnated. A static demand reflects in a reduced offtake of products and, as a result, entrepreneurs suffer as they are not able to sustain their sales and growth," the official said.

DFPI, under the aegis of the Ministry of Agriculture, has earmarked a budget of Rs 2 crore this fiscal for its promotional campaign, via both the print and electronic mediums.

The print campaigns are slated to break in another two weeks, while the electronic campaign is expected to take more time. The department is also exploring different avenues, while sifting through

agencies, before deciding on the electronic campaign and its target consumers.

The installed capacity of fruit and vegetable processing industries in the country increased from an estimated 21 lakh tonnes in 1999 to 21.10 lakh tonnes in 2000.

The production of processed fruit and vegetables increased from 9.8 lakh tonnes in 1999 to 9.9 lakh tonnes in 2000. In the same period, the number of licences issued under the Fruit Products Order (FPO-1955) increased from 5.198 to 5.293, the source said.

Business Line

15.7.2001



Roadblocks in cold chain infrastructure

The transport and retail segments in the cold-chain infrastructure, and not just cold storages, need Government attention to attract private investment, according to cold-chain operators and perishable goods importers.

Mr Yashpal Jain, Managing Director, Snowman Frozen Foods Ltd, said that the high capital costs involved in setting up the facility were a major disincentive. High import duties and excise duty, and high running cost due to industrial rate of power tariff, were discouraging investments.

However, there was awareness on the part of Government and the private sector on the need to increase capacities in the cold-chain, particularly in a country where agi-business plays a major role in

the economy. While there are subsidies from the National Horticulture Board (NHB) and support from State government agencies, these cost about Rs 10-20 lakhs, and did not matter when investments could run to several crores, he said.

What is needed is a holistic look at encouraging this sector. For instance, where perishable goods were concerned, quality is a key factor. Imported equipment was far ahead in quality compared to the domestically-available components. But with import duties at 50-60 per cent and excise duty on imported equipment alone, these could not compete with domestic manufacturers, Mr Jain added.

For cold-chain development, transport was a key factor. But transport by refrigerated trucks was twice as costly vis-à-vis ordinary trucks.

This was simply because an ordinary truck that costs about Rs 6-7 lakhs, when fitted with refrigeration facility will cost Rs 16-17 lakh. The higher cost is due to the cost of equipment import. Transporting perishable agro-commodities at low cost was just not possible, he said.

At these price levels, investing in reefer trucks was not a viable proposition since they are not in use throughout the year. Using a cold-chain infrastructure should not result in significantly increasing the cost of the product, Mr Jain said.

According to an Australian apple importer, transporting a 20 kg box of apples from Chennai to Delhi

costs Rs 100, nearly double that of using ordinary truck. Comparatively, transporting one box from Australia works out to about Rs 131. Transport cost for a 40 ft container with 1,029 boxes works out to about Rs 1.35 lakhs.

Mr Jain said that if the Government could allow the use of reefer containers carrying import cargo for domestic use also, it would help cut transport costs. This was a common practice in other countries.

Mr Jain said that , internationally, there was excess capacities of reefer containers. In India, the containers carrying the perishable cargo are restricted only to the port area and can be used only for export.

If these could be permitted to carry domestic cargo, the hire/lease charges would prove economical. Allowing use of reefer containers in domestic transport will also encourage movement by rail. Such a move will also be beneficial to the shipping lines.

The condition of roads and the frequent hold-ups due to various check posts were a major bottleneck. Moving a truck load of goods from Bangalore or Chennai to Delhi takes six days. The journey time could be cut by half if the road conditions were improved. According to Mr Jain, on the retail side, temperature controlled conditions were required to complete the chain from the producer up to the consumers.

But refrigerated display shelves and cabinets were not available domestically and imports are

expensive. What is commonly available is the horizontal boxes that are not useful for display to attract the customer, he said.

Domestically, the recent import of apples and other fruits has helped to increase the awareness of producers and consumers about the quality of presentation. The farmers understand the kind of competition that they are looking at.

He said that there were enquiries from horticulturists in North India about the recent developments in post-harvest handling.

Business Line

16.7.2001



AP mango jelly units told to take up mechanisation

Mango jelly units in the vicinity of Kakinada and elsewhere in East Godavari district have to take up mechanisation to survive in the changed scenario and the financial institutions have to assist the traditional hundred-year-old industry liberally in this venture, Mr K.V.Tirumala Rao, Chief Consultant of Andhra Pradesh Industrial and Technical Consultancy Organisation Ltd (APITCO), has said.

He was addressing the inaugural session of the three-day training camp for jelly makers organised jointly by APITCO and the Small Industries Development Bank of India (SIDBI) here on Monday.

He said mango jelly was being made in cottage units at Sarpavaram, Atreyapuram, Bhoopathi- patnam and other villages

in East Godavari district for more than 100 years and the annual turnover amounted to nearly Rs 10 crore. However, the industry remained neglected and even the basic facilities were non-existent.

Jelly was being made and dried manually mostly by women and unskilled labour, in unhygienic conditions. Marketing facilities were also pretty poor and several historical reasons were responsible for the sad state of the industry, he said.

He said APITCO, along with SIDBI, has taken up a programme to develop mango jelly units in the district as a cluster. The salient features of the cluster development comprised mechanical pulping, pulp drying using solar drier technology and packing of the finished product.

The jelly-makers would have to invest Rs 20,000 on the purchase of pulper (100 kg per hour), Rs 60,000 on the solar dryer (50kg) and Rs 1,500 on the packing machine. In all, the machinery would cost Rs. 82,000 and the total project cost would be of the order of Rs. 1.6 lakh, of which the promoters contribution would be Rs 10,655, the margin money advanced by the Khadi and Village Industries Commission Rs. 26,638 and the rest by the bank.

Mr G.V.Rao, one of the pulp manufacturers said the pulp could be preserved for long periods with proper mixture of preservatives and jelly season could be extended. At present, jelly was being manufactured only in the three-month period from April to June. The pulper could be used for processing other fruits and

it could also be modified to suit the needs of the jelly units, he said and advised the jelly-markers to diversify the product range. Mango cheese could be prepared with the same machinery.

Prof M. Ramakrishna Rao, of the Society for Energy, Environment and Development (Seed), Hyderabad, said the society had developed the solar drier technology for vegetables and fruits and it would be of great help to the jelly units in particular.

Mr K. Manmatha Rao, Assistant General Manager of Nabard, said the bank would help the traditional industry to modernise and upgrade itself.

Business Line 17.7.2001

◆ ◆ ◆ Agro-processing growth set at 10%

In a bid to increase the level of value addition in agriculture, the Union ministry for food processing industries has set a target of achieving 10 per cent processing of agro-produce in the country by the end of the decade as against the current dismal low level of less than two per cent.

"While we have been discussing the investment required for achieving the 10 per cent level in agro-produce processing, we also have to think of the requirement of technology which is the critical factor in increasing the viability of the agriculture sector," Chaoba Singh, Union minister of state for food processing industries said. The Dept. of Food Processing Industries has

recognised that 75% of the food processing industries in the country are in the small and home scale who have made a major contribution to the current food processing in the country.

There are around 5,000 food processing units in the country and a majority of them are in the small and home scale who need up-gradation in terms of appropriate technology in plant and machinery. The department of food processing industries is of the view that up-gradation of this largest concentration of small and home based food processing units will not only enable the entrepreneurs to improve their profitability, but also increase the offtake of agro produce from the farmers.

"I would like to suggest that industry associations in each state or region must take a fresh look at all the existing food processing industries, large, small or home scale who have not been able to perform to maximum capacity and what inputs are required to enable these entrepreneurs who have been preserving in this sector against all odds but who are prevented from realising their potential because of inadequate technology or outdated machinery," the minister said.

Singh was in Pune to address seminar on "Intensification of Indian Food Processing Industries The Role of Technology and Machinery" organised by Confederation of Indian Food Trade & Industry, New Delhi, and co-organised by Mahratta Chamber of Commerce, Industry & Agriculture and UNIDO with the support of the department of food

processing industries, Union ministry of agriculture. While underlining the need to ensure that technology and machinery are being used which will remain cost effective, Singh said these should be feasible for Indian conditions, which have diverse applications to be able to process different kinds of raw materials, which will be available through different seasons of the year.

Business Standard 18.7.2001

◆ ◆ ◆ Mother Dairy will soon provide you bread & butter

Very soon you'll see the blob of butter melt under hot competition. The ubiquitous Mother Dairy is firming up plans to get into the business of selling both bread and butter. It seems bread is not so much of a treat in the marketplace as compared to butter. Industry observers said that behind these product launches, lies a strategy to corner giant MNCs like Britannia and Nestle which have either stepped into the butter market or are drawing up plans for the same.

Initially Amul and Mother Dairy had mutually decided not to operate in the same market on account of being the offshoot of the same parent NDDB but Amul officials say that the equation might change now. "It is time the two came together to fight the likes of Nestle and Britannia," industry sources told ET. In fact, Amul and Mother Dairy have already broken the unwritten code of conduct by launching their respective curd brands in Delhi and the NCR region.

The butter market has been rather stagnant for the last few years at 50,000 tonnes every year. So far, the Amul brand of Gujarat Cooperative Milk Marketing Federation (GCMMF) was the undisputed leader in this segment. Britannia came with its Milkman brand and gradually started eating into Amul's market share. However sources point out that Amul is still the king in this segment and it will take a while before Britannia catches up with Amul nationally.

Sources said that Amul and Mother Dairy's presence in this segment will however keep prices of butter in check. Had Amul not been present in butter, Britannia would have sold its butter brand at a higher price. Once Mother Dairy gets into the act, it will be doubly difficult for companies without deep pockets to play around with the price band. Mother Dairy is currently readying the Pilkuah plant to churn out butter in the next few months. As regards bread, it has already started test marketing Perfect and Harvest Gold to gauge the demand on a daily basis. Sources say a third party manufacturer will knead the dough for Mother Dairy bread.

Economic Times 20.7.2001

AAI plans cold storage unit at Sahar

The Airports Authority of India (AAI) is planning to construct a 2,400 sq meter cold storage centre at the Mumbai international airport by August 2002, to facilitate storage and preservation of perishable goods' meant for exports.

The AAI, which is working with the Agricultural Processed Food Export Development Authority (Apeda) for the project, has pegged the cost at Rs 15 crore.

S Mathrubutham, general manager (cargo), at the Mumbai airport said: "The new air-conditioned centre is meant to encourage exports of perishable items from the Mumbai airport, which accounts for over 35 per cent of perishable air export cargo in India. After construction is completed, the new centre will provide enough space for all perishable goods meant for exports".

Currently, construction work is going on to provide an alternative arrangement for storage of perishable items in the interim. The interim facility will be commissioned by September 2001, while the main project is expected to be commissioned by August 2002.

The new facility is also expected to benefit Air-India, which currently accounts for over 40 per cent of the perishable air cargo exports from the Mumbai airport.

RJ Treasuryvala, director of the Mumbai airport, said the airport earns about Rs 100 crore a year from cargo movement.

The airport's cargo complex now has all the required facilities, including airline offices, customs, banks and logistics at the same place, he said. The dwell time (time taken to clear goods from the cargo complex) for export and imports at the Mumbai airport currently is 46 hours and 9.3 days, respectively.

The government is understood to be considering introduction of "known shipper concept", to further reduce the dwell time by awarding speedy clearances to large and regular exporters.

The Mumbai airport handled 1.29 lakh tonne export cargo and 61,485 tonne import cargo during fiscal 2000-01.

Business Standard 23.7.2001

◆ ◆ ◆ Assocham for umbrella law to boost processed food sector

The Associated Chambers of Commerce and Industry (Assocham) has suggested a broad-based processed food development act to enable the country face the post-WTO challenges and boost growth in the sector.

In a proposal submitted to the government, the chamber said that there were currently 20 legislations both at the Centre and states scuttling the growth of this sector.

'The chamber apprehends a surge in import of 'waste' food items and has therefore called for an umbrella legislation that addresses export and import regulations on genetically modified foods, creates a futures market and an enabling environment for attracting large doses of FDI into the sector" the chamber said in a release on Monday.

It said there was a need for a paradigm shift in the legal framework to provide for single window promotional and development

mechanism (from the existing regulatory and penal regime) to cater to the needs of the Indian food industry.

The export of agricultural and processed food products has moved erratically during 1996-99.

Exports fell from Rs 7,722.80 crore in 1996-77 to Rs 7,270.75 crore in 1997-98 but rose to Rs 9,674.20 crore in 1998-99, Assocham said, adding exports of groundnuts, jaggery and confectionary, cocoa products, cereal preparations and alcoholic beverages were the worst hit during this period..

Financial Express 24.7.2001

◆ ◆ ◆ Markfed launches ready-to-eat foods

Punjab Markfed launched a fresh range of ready-to-eat canned food products here last evening.

Mr D.S Bains, MD, Markfed, launched these products at the Teej festival organised by the Chandigarh Press Club. Mr Bains said Markfed has exported these produce. Dubai and Canada are the main buyers.

The recipes of the new products such as aloo-wari, Kari-pakora, palak-paneer and aloo mathee among others have been prepared by celebrity chef Jiggs Kalra.

Mr Bains said the products have been prepared for Indians especially Punjabis who are settled in other countries. Markfed plans to replace the traditional tins with easy-to-open soon.

Tribune 24.7.2001

Sops to agro-processing units in rural areas

Union minister of state of finance Balasaheb Vikhe Patil has suggested that fiscal incentives like tax holidays be provided to encourage setting up of agro-processing units in rural India.

He was delivering the presidential address at the two-day National Seminar on Value Addition in Indian agriculture organised by the Industrial Development Bank of India (IDBI) with Canara Bank and Punjab National Bank. Farmers, Mr Patil said, should explore the possibility of setting up processing units in villages. Farmers could access the latest food processing technology to facilitate value-addition for various agriculture products.

The biggest fear in rural India related, he said, to the imminent entry of large corporates into agriculture. While India had attained self-sufficiency in agricultural production, rural support policies continued to be adhoc in nature. There was a need for permanence in the existing rural support mechanism, he added. Referring to the flow of credit to rural areas, he said banks and financial institutions while meeting the stipulated targets had not been given to the needy. "If the banks are able to identify the demands and direct credit accordingly, it would help rural India tremendously," he added.

Lack of adequate infrastructure, he continued, hampered the growth of rural India. Citing the example of sugarcane growers in Maharashtra; he added that farmers had invested their time, effort and money in

developing infrastructure in the rural areas.

Economic Times 24.7.2001

◆ ◆ ◆ ICI sees growth in flavours, starch

ICI India sees flavour-fragrance and starch business as the major drivers of growth as it expects the per capita consumption of processed foods, in which both of them find wide applications, are bound to increase.

In fact the company is lobbying with the government to allow physically modified starch produced in India to use in the country.

"Indian government only allows chemically modified starch to be used in food. However, there is no embargo on physically modified starch that are imported. We have requested the government to amend the law so that Indian physically modified starch can be used in food," Mr Rajaram, director, ICI, said here yesterday, adding that physically modified starch is better than the chemical one with much less side affects.

It intends to get out to the pharmaceutical and rubber chemicals businesses, Aditya Narayan, managing director of the company, said, "We do not see these as our focus areas in the future. It is not in a hurry to divest them. We will wait for the right time and the right buyer to maximise our return. ICI India will toe the policy of its parent which does not see them as the core area of operation worldwide".

Business Standard 27.7.2001

India's Milk output : Touching new Horizons

India is registering a steady rise in milk output which is attributable due to rise in production per animal rather than due to increase in number of animals, says the Food and Agriculture Organisation (FAO). The production during 2001-02 (April / March) marketing year could rise to an estimated 81 million tonne (m.t) from 79 mt and 77 mt in the previous two years respectively. The agency says that in the world market, the prices of milk and milk products would rise during the later half of the year as a result of constrained supply. Poor pasture condition due to long dry spell in Australia and dry weather in most of New Zealand may lead to 2001-02 outputs getting off to a slow start. According to FAO, there may be diminished supply of some dairy products as a result of 10 percent expected shortfall in milk production of Argentina. The cheese, casein and in the international market is expected to remain somewhat stable, as supply and demand are less volatile and there is absence of strong demand. The global milk production is expected to rise to 595 m.t. with an increase of 9m.t. in 2001 and the major contributing countries are India (2 m.t.), Pakistan, EC, Brazil and Ukraine (1 mt each). As a result of better economic growth in South East Asia, import of milk powder is expected to increase during 2001. FAO noted that oil-producing countries in West Asia and North Africa and Venezuela might demand for variety of dairy products as a result of better revenue

flow through oil exports from the countries.

Agriculture Today

July 2001

Direct export subsidies for farms goods

The Vajpayee government plans to provide direct subsidies to the exporters of all agriculture commodities that have been at a disadvantage in the international market due to unfavourable minimum support prices (MSP). A new mechanism would be adopted to pay the subsidies in which traders would be paid the difference between total cost and final export cost. The subsidies are the part of new agriculture policy and yet to be approved by the Cabinet, which also proposes removal of quantitative restriction on wheat, its products, rice, coarse grains and butter, availability of credit for export at low interest, meet part of the expenses toward export insurance and export guaranties : further, it plans to offer funding for storage at low interest of 8.5 per cent from 10 per cent to enhance farmers holding capacity. The subsidies would ensure Indian agricultural produce to compete with US and EU in the world market. The government admits that these subsidies could not be given earlier because of lack of appropriate mechanism to extend them. All the new subsidies are GATT-legal and targets at reducing cost of marketing and handling, upgradation and processing, cost of internal and international freight transport. US and Canada have questioned India in the meeting of Committee on Agriculture in WTO held in March

2001 for prohibited export subsidies. In this regard, the policy has suggested provision for subsidy for all those commodities where the export cost is more than the final export price realised. The policy has suggested auctioning excess wheat with FCI to exporters and domestic firms because in the international market, it has no place due to MSP although it is comparable to US soft red winter wheat. Exporters, feel that according to the policy, the govt, should reimburse for export carried out in association with government organizations like Apeda, Spices, Tea and Coffee boards removal of all would be reimbursed the costs of internal and external freight and handling charges to exporters. The policy also suggest restrictions on export of wheat and wheat products; in case of basmati and non-basmati rice, it does away with both QR and wants to get every contract with Apeda. The policy pointed out that coarse grains should also be free from quantity restriction as only 35 million tonne is consumed in India and around 67-96 million tonne is traded internationally every year. Butter and pulses can always be imported with in a cheaper price whenever domestic shortfall is realized, which the policy suggests pricing exports of these commodities. For instance, butter f.o.b export price ranges form \$3,062 to 3,312 per tonne while it can be imported at \$1,522-1,678 per tonne. Similarly, in case of pulses, exporters are getting \$ 523-632 per tonne while the cost of import is \$312-411 per tonne.

Agriculture Today

July -2001

Pineapple export zone proposed in Bengal

Agricultural and Processed Food Products Export Development Authority (APEDA) and the West Bengal Government will be shortly entering into a memorandum of understanding (MoU) for establishing a pineapple export zone in Jalpaiguri area.

According to the APEDA Chairman. Mr Anil Swaroop, the project report is ready and the MoU is expected to be signed during next fortnight.

The agri-export zone, to be set up in an area of 1,000 hectares, is estimated to cost Rs 38 crore. Of this Rs 30 crore is expected to be invested by the private sector, while the remaining Rs 8 crore will be shared by different Central Government agencies.

Mr Swaroop told Business Line that to start with, one processing unit with a juice extraction capacity of 5 tonnes per hour would be set up in the proposed export zone. The West Bengal Government had identified two processors but was yet to finalise among the two for setting up the unit.

The processing unit is estimated to cost around Rs 13.58 crore. It is expected to be financed through the promoter's investment of Rs 5.44 crore and term loans of Rs 8.15 crore. The Jalpaiguri Horticultural Research and Development Farm will be the nodal research organisation of the pineapple export zone.

Mr Swaroop said similar

agriexport zones for different products were coming up in various states. While the Tamil Nadu Govt. would be establishing a floriculture export zone, the Karnataka Government would set up different export zones for gherkins, pomegranates, rose onions, grapes and mangoes.

In Uttar Pradesh also separate agri-export zones are being set up for floriculture, mangoes, menthol and bovine meat. A litchi export zone will be coming up in Bihar and vegetables export zone is being established in Punjab. In Maharashtra, there will be two agri-export zones for grapes and floriculture. In Himachal Pradesh, an export zone for apples and apple-related wines would be set up.

The APEDA Chairman said that Kuppam in Andhra Pradesh, where high-value crops were being grown under an Israeli demonstration project, should be converted into an agri-export zone. Similarly, a mangoes export zone could be established in Vijayawada.

The concept of an agri-export zone, according to him, is an attempt to take a comprehensive look at a particular produce located in a contiguous area for the purpose of developing and sourcing the raw materials, their processing and packaging leading to final exports.

Business Line

1.8.2001

Food products import

India said on Tuesday that food products imported into the country should be valid for at least 60% of

their original life liked at the time of shipping. "Import of edible/food products shall be subject to the condition that, at the time of import, the products have a valid shelf life of not less than 60 percent of their original shelf life," a government statement said.

Hindustan Times

1.8.2001

Norms on shelf life of food imports introduced

The government has imposed conditions regarding the valid shelf life on imports of edible products. The Directorate General of Foreign Trade (DGFT) in a notification said, "Imports of all edible products, domestic sales and manufacture of which are governed by the Prevention of Food Adulteration Act 1954, shall also be subject to the condition that, at the time of importation, the products are having a valid shelf life of not less than 60 per cent of the original shelf life".

The shelf life of the product is to be calculated on the basis of the declaration given on the label of the product, regarding its date of manufacture and the due date for expiry.

DGFT has also issued a notification in accordance with the conditions of Livestock Importation Act 1989, as amended by Livestock Importation Ordinance 2001 according to which import of meat and meat products has been subjected to obtaining of a sanitary import permit.

A sanitary import permit will

have to be issued by the department of animal husbandry and dairying for import of meat and meat products of all kinds including fresh, chilled and frozen meat, tissues or organs of poultry, pig, sheep, goat, egg and egg powder and milk.

Economic Times 1.8.2001



Food processing industry yet to take root in India

India is the second largest producer of fruits and vegetables in the world, yet commercial processing of these is less than 2 percent. This compares with around 70 percent in Brazil, 78 per cent in Philippines and 83 per cent in Malaysia. The reason for this paradox can be better understood if one examines the linkage between the cultivators and the industry. In a study for Nabard on "Linkages between Farm And Non-Farm Sector :Role of Processing of Horticultural Products", K V Subrahmanyam has pointed out that the industry faces two main problems: non-availability of the right processing varieties and high raw material costs.

In processing tomatoes, for instance, India uses seven tonnes to make one tonne of tomato paste concentrate compared to four tonnes abroad - a reflection of lack of right processing varieties. The raw material cost of tomato processing on the other hand, is around Rs 1,000 per tonne, compared to Rs 300-600 abroad.

The high input cost is, in turn, attributable to seasonality in production of these crops, for one,

and presence of market intermediaries, for another. The first one takes us to the problem of price risk. Cultivators first look at their profitability, of which cost of cultivation, yield and price are major components. Seasonality implies a glut and low prices in peak season and high prices in off-season. The food processing industry cannot take advantage even of the low prices in peak season since cultivators do not find it worth harvesting the crop. Secondly, perishability of these crops also means high transport and handling costs in the absence of good cold storage facilities.

Studies on location of fruit and vegetable processing plants highlight the fact that, often, there is no rationale based on raw material availability for locating the plant in that particular place. A logical solution would, then, be the setting up small scale processing units in areas where the crops are produced. This would help both the cultivators and the industry to address the price risk issue by eliminating middlemen and bringing down costs of transportation. According to studies, payments by cultivators to commission agents account for 40-60 per cent of total marketing costs.

Where does the industry stand in terms of exports? The New Industrial Policy gave a thrust to fruits and vegetables processing by way of concessions and listing it as a high priority area. There has been a visible rise in the growth rate of processed exports since 1991-in absolute terms, this increased from Rs 102.96 crore in 1990-91 to Rs 1,366.96 crore in 2000-01.

Interestingly the share of exports in total production has been on the decline (barring 1997-98, when there was a closure of units, due to imposition of excise). This could be attributed to changing preferences and lifestyle of domestic consumers, a rising middle class with higher disposable incomes and availability of wider range of products.

Economic Times 3.8.2001



Rs 8 cr cleared for food processing parks

The Union Government's department of food processing has sanctioned Rs 4 crore each for establishment of two processing parks in Karnataka, the Parliament was told on Thursday.

Minister of State for Agriculture Sripad Naik stated in the House that these parks would have fruit concentration/pulp making units, cold storage and warehousing facilities with uninterrupted water and power supply, effluent treatment plants and quality control systems. The parks envisage backward linkages with the farmers in the vicinity which would benefit them.

Deccan Herald 3.8.2001



Centre plans to amend PFA Act

The Centre is planning to amend the Prevention of Food Adulteration (PFA) Act to make it uniformly applicable in all states and also remove the limitations that have crept into the Act since it was formulated in 1955.

Speaking to The Financial Express, Planning Commission member Sompal said that the Act suffered from several shortcomings and efforts were on to remove them.

"The law varies from state to state and the multiplicity of legal provisions leads to several problems. The industry has a case for demanding a single and a user-friendly Act."

According to the industry the Act suffers from several shortcomings. On the one hand it allows the use of yellow basic coal tar dye which is byzantian in nature, while on the other hand it does not allow sugar-free additives in food. Representatives of the confectionery industry contend that sugar-free additives do not pose any health hazards.

On the contrary, studies prove that chewing gum with sugar-free additives are good for teeth, they added.

There are various other rules in the Act that have outlived their use, and should be done away with; the industry argues. Some time back, the committee on food and drug administration, Gujarat, had circulated a proposal for amendment of the PFA Act. The committee was informed by the additional director general (PFA) that the process of review of the PFA Act was in progress in consultation with the health and family welfare ministry.

Financial Express 5.8.2001

NHB identifies 6 areas in TN to build cold storage systems

The technology for setting up of cold storage chain is ready for adoption. The National Horticulture Board (NHB) has identified six areas for the establishment of cold storage systems in the State.

The Government, according to M.B Pranesh, Special Commissioner and Secretary, Agriculture Department, is proposing to demarcate these areas as Agriculture Export Zones (AEZs) in Tamil Nadu, since the State has enormous potential for the development of horticulture.

Talking to newsmen after inaugurating a two-day National Seminar on Integrated Development of Tropical Horticulture, Mr Pranesh said the proposed scheme was still in a nascent stage.

He, however, disclosed that the areas identified were Hosur for English vegetables, Salem for summer mango, Kanyakumari and Tenkasi for winter mango, Tiruchy and Thanjavur for banana and Theni and Kumbum for grapes.

Though the cold storage was not necessary for cashew, this has also been included in the list of produce for AEZs, he said.

The objective of the NHB was to develop high-quality horticultural farms in identified belts and make such areas vibrant for developing commercial horticulture database and aid in technology development and transfer, he added.

Earlier speaking at the seminar,

the Commissioner of Horticulture and Plantation Crops, Mr Surjit K. Chaudhary stressed the need to make available good quality planting material, for greater focus on quality parameters, promotion of drip irrigation and fertigation and adequate steps to reduce post harvest losses.

He lamented that over 25 per cent of the fruits and vegetables produce in the State was wasted due to lack of post harvest technology and emphasised the need to upgrade the competitive skills to grow. He pointed out that Maharashtra, Karnataka and Andhra Pradesh had taken the lead in horticulture development.

Presenting a paper on the role of the NHB in the promotion of commercial horticulture in the country, Mr J.P. Negi, Executive Director, NHB said so far the emphasis has been only for table consumption. There is a pressing need to introduce processable varieties too'.

He pointed out that this would require certain amendments to the existing excise laws-particularly by delinking light beverages with others and brand them as 'health drinks', to the Indian Forest Act-to restrict ruthless exploitation by the petty contractors, to the Narcotics Drugs and Psychotropic Substances Act by facilitating conversion of narcotics into Pharma industry and the need to redefine plantation crops.

The NHB, he said, introduced a number of promotional schemes. Already 325 projects with a subsidy of Rs 94.75 crore had been sanctioned creating a capacity of

15.93 lakh tonnes and another 75 projects were in the pipeline, he added.

On the present status of horticulture, Mr Negi said only 8.94 per cent to the total agricultural holdings was under horticulture accounting for a production of 141 million tonnes. Of this, the post harvest losses was as high as 40 per cent, estimated at around Rs 25,000 crore.

Business Line

6.8.2001



That's the way the cookie crumbles

The government has been tinkering with the food processing sector for a long time but only on a piecemeal basis. But a full fledged new policy has yet to see the light of day. Earlier this year, the government had made some noises about introducing a new Processed Foods Act, which could have completely overhauled the existing Acts governing the processed food industries and looked at removing impediments in investments in the sector, both Indian and foreign. The industry is still waiting for it expectantly.

A few years ago a McKinsey study had identified confectionery, a small part of the entire industry, as a sunrise segment with a potential to grow up to Rs 5,000 crore by the year 2000. Analysts say that it did not live up to even half that potential largely because it required investments to the tune of over Rs 1,000 crore to achieve that turnover. Lack of fresh investments is

essentially because of the impediments to growth in the sector. These include high incidences of tax severely affecting the profitability of the industry, reservation of certain products for the small-scale sector and very restrictive standards under PFA that impinges on the range of products which can be manufactured. The Rs 1,750 crore confectionery industry, which is barely growing at about 4 to 5 per cent per annum is plagued by lack of profitability.

Industry believes that the government does not want to see the reasoning behind the plea of liberalising PFA standards, some of which are archaic. The industry had been lobbying hard for the introduction of antioxidants (to increase shelf life of products) and sugar free confectionery and chewing gums in the market for a long time. Though these are freely used in other parts of the world, the Indian government does not allow them specifically because PFA standards do not allow it. This is despite the fact that the government is signatory to Codex standards, which have cleared these additives.

The standards originally prescribed are now totally outdated and in some cases such as in chewing gums (classified as food), the standards could result in absurd conclusions as chewing gums have no calorific value and use artificial flavours and sweeteners below the prescribed levels attract the provisions of the Act.

Owing to the detailed prescriptions of standards in PFA, diet soft drink products and long life UHT milk could not be produced in

India till recently. After the relevant provisions were amended, the UHT milk segment has attracted a lot of investments from companies like Nestle, Amul, Vijaya. Also, in a highly competitive world, such restrictive practices, do not enable companies to seize an opportunity the moment it occurs and inhibit the Indian industry from foraying into new ventures.

So while exports suffer, imports flood the market. In the Indian market these days, an entire array of imported food products can be found, which enjoy a good patronage from customers. Of course, none of these products conform to the Indian PFA Act and some of them are also in segments reserved for the small scale industry. The only sufferers are the companies which cannot make these products in India due to archaic rules. Also, if these companies could have set up manufacturing bases in India for these products not only would they have contributed to revenues but also towards employment generation. On the other hand, if these imports get held up, it could be viewed as a non-trade barrier under WTO rules.

Indian food processing industry in the meantime is losing valuable time. Imported products are getting into the market thereby shutting the domestic industry out from the market place. It is about time; therefore, the government came out with a holistic policy, which addresses all these concerns regarding the introduction of good manufacturing practices and development of the sector on scientific lines to enable the industry

to compete in the era of globalisation. In fact it is already far too late and a lot of catching would have to be done by the Indian industry in this potentially rewarding sector.

Economic Times

7.8.2001

Training Programme on Testing of Synthetic Food Colours

A training programme on 'Testing of Synthetic Food Colour Preparations and Mixtures' as per IS 5346 : 1994, was organized in the Laboratory of the Western Regional Office of the Bureau of Indian Standards (BIS), Chemical Section on 16 March 2001. Eighteen participants from Synthetic Food Colour licensees located in the States of Maharashtra and Gujarat attended the programme.

The programme was inaugurated by Director and Head, WRO Laboratory. Subsequently practical demonstration of various tests like identification of dyes, estimation of total dye content, water insoluble matter, lead, arsenic and heavy metals as per IS 5346 : 1994 was given to all the participants. The estimation of lead content was also demonstrated by Atomic Absorption Spectrophotometer technique following digestion of sample using microwave digestion. Estimation of total dye content in different types of mixtures using direct spectrophotometer technique, paper chromatographic technique and a combination of the two techniques were demonstrated, in which participants showed keen interest.

During the training programme importance of various quality assurance measures, like calibration of equipment - Balance, Oven, Glassware, Thermometer, etc; use of proper quality of chemicals, filter paper and distilled water; proper maintenance of raw and other data concerning testing were also explained to the participants. Many of the problems faced by them with respect to testing and the various factors responsible for causing variation in test results were also discussed with the participants.

Standards India

April 2001

Water, water everywhere, not a safe drop to drink

Do packaged water brands pose a risk to your health? The government had asked bottled water manufacturers to conform to quality standards in September last year. Six months later, on the eve of the March 29 deadline, one finds that just a handful of brands in the market- estimates vary between 750 to 5,000 brands of bottled water - have done so. Not only have most water bottlers failed to certify their products, they are lobbying for an extension of the deadline to certify their products.

Ten companies, including Pepsico India, Lifeline Aqua, Blue Light, Sapphire, Uma Beverages and Khodiyar Beverages in the packaged water category and Himalayan and G.C. Beverage in the mineral water category, have passed the quality norms. The rest are hoping to push back the deadline. Interestingly, Bisleri, the market

leader with close to 70 per cent share of the Rs 700 crore branded water industry, and Kinley, Coke's brand, do not yet make the grade.

Bottled water manufacturers have roped in CII to lobby with the Ministry of Health, which issued the notification which makes it mandatory for water brands to carry the Bureau of Indian Standards (BIS) mark. These manufacturers want the ministry to extend the deadline and to do away with the annual marking fee of Rs. 1.49 lakh or Rs 25 per 1000 litres of water sold, whichever is higher. Three days ago, a meeting was also held with the Department of Food Processing Industries to request them to take up these issues on behalf of industry with the Ministry of Health.

"The industry says it can fulfil all the standards laid down by BIS, but not within this time frame," says CII. "The marking fee is too high. The FPO mark is also required but no fee is charged for this. Why should BIS then charge such high fee," asks Bisleri director Sethi. He says BIS is dragging its feet over processing applications and should extend its deadline. Coke's spokesman had the same pitch : "Inspections were carried out and we were asked to install extra equipment, which we did. But there appears to be some procedural delays within the BIS because of which we have not got our certification yet" he said.

Standards India

April 2001

Stringent packaging norms evolved for Water & Soft Drinks

Size does matter say mineral water dealers.

A new directive by the ministry of consumer affairs, food and public distribution is threatening to raise a storm in the cup, for the mineral water and soft drinks industry.

Laying down stringent packaging guidelines for aerated soft drinks, non-alcoholic beverages, mineral water and drinking water, the new amendment notification issued last week, allows companies to sell their products in specific pack sizes such as 100 ml, 150 ml, 200 ml, 250 ml, 300 ml, 330 ml (cans), 500ml, 750 ml, 1 liter and in multiples of 5 litre only. The order which will come into effect from 29 March, 2001 bars popular pack size such as 350 ml and 1.2 litre.

While the directive would have little impact on the soft drinks industry, it's the fast growing Rs 400 crore mineral water market which will be affected most as most companies in the segment are trying to penetrate the market with different pack sizes.

Ramesh Chauhan's Parle Bisleri, for instance, has in its portfolio various pack sizes including 1.2 litre pack and 20 litre pack as well. According to industry sources, its 1.2 litre is the largest selling consumer pack. Bisleri which holds a market share of over 50 per cent in the Rs 400 crore mineral water market would be badly hit.

The closest competitor Bailey

owned by his brother Prakash Chauhan which has about eight percent market share recently launched a 350 ml pack branded as Chotu Bailey. "The order will have a negative impact on the growth of the industry," Coca Cola India spokesperson said. Coke's mineral water brand Kinley which is currently available in 500 ml and 1 litre bottles though will not be affected. Pepsi's mineral water brand Aquafina is also available in 750-ml pack size.

The old guards in the branded water market are already busy meeting the deadline of the earlier directive issued on September 29, 2000 by the ministry of health and family welfare which made it mandatory for all companies producing bottled water to put the ISI mark on the label. The amendment notification issued also derecognised medical endorsements.

The new directive also comes close on the heels of the recent blow to the soft drinks industry which is already reeling under the recent order passed by the department of food processing industries that contains no fruit juice labels be pasted on returnable glass bottles. The order if accepted would hit the industry hard the would take it back by Rs 600 crores the value of the floating stock of about 100 crores bottles.

Standards India

April 2001

Award for HP food processing unit

The Institute of Economic Studies had conferred the prestigious

"Udyog Rattan Award" and "Excellence Award" to HP Horticulture Produce Marketing and Processing Corporation Ltd. popularly known as HPMC. It was also conferred the "Bharat Jyoti Award" for the year 2001-02. The unit has now been selected for the 15th "Europe Award for Quality" to be given in Paris on October 22.

Hindu

29.8.2001

New policy to promote agro-exports on anvil

The Union minister of state for commerce Digvijay Singh has said that his ministry is preparing a new policy to promote agricultural exports.

Inaugurating a panel discussion on "WTO and New International Trade Regime," organised by the Indian Agricultural Research Institute (I.A.R.I.), here on Saturday, he said that the new policy proposed to provide farmers with the latest biotechnology and extensive market intelligence, greater support under the WTO - compatible green and amber boxes, removing restrictions on inter-state movement of commodities and assisting corporates interested in export-oriented contract farming.

The policy also envisages close cooperation between the ministries of commerce and agriculture and department of bio-technology.

Under WTO, green box measures are the least trade distorting and include R&D, extension, food security stocks,

disaster payments and structural adjustments. The amber box contains measures such as market price support, direct payments and input subsidy which are subject to careful review and reduction overtime, the minister said.

The new agriculture policy aims to encourage private sector investment in agriculture, particularly in research, human resources development, post-harvest management and marketing. Private sector should be encouraged to procure land for research and incentives should be given to them for researches in seeds. Mr Singh said.

Agricultural research, extension and education system should be oriented to meet the new requirements under world trade specifications.

The focus of the system should be on reduction in costs, increase in crops production and improvement in the quality of produces, he said.

Considerable attention should be paid to evolve varieties of crops which have built-in mechanism to resist insects, pests and diseases as well as drought and water logged conditions, the minister added.

Financial Express 27.8.2001

Subsidised cold storage scheme remains frozen

Unlike the back-ended loan-cum-subsidy scheme for cold storages announced by the Government in December 1999, the back-ended capital subsidy scheme for creating

cold-chain announced in May 2000 as part of the wider post-harvest management remains a non-starter. The National Horticulture Board (NHB) has approved up to 20 per cent subsidy for the comprehensive scheme for development of commercial horticulture through post-harvest management.

According to NHB assistant director Hari Singh, this subsidy is subject to maximum limit of Rs 30 lakhs per project in the north-Eastern, tribal and hilly regions and up to Rs 25 lakhs in the rest of the country. Units producing aseptic packagings, special crates, cartons and nets are entitled for subsidy of up to 50 per cent.

The major components of cold-chain include pre-cooling centres near the farm-gates, reefer vans, ripening and curing chambers, radiation units, auction platforms and even retail outlets. He pointed out that NHB has also framed a whole lot of specifications for space requirement for storing different kinds of fruits and vegetables in box/bag/carton or in bulk. However, he admitted there are not enough takers for subsidy announced for a host of schemes like green house, tissue culture, organic foods, herbs, bio-pesticides, medicinal and aromatic plants, besides building infrastructure for cold-chain.

In a mid-term appraisal of sorts of both the schemes, Mr PC Chib, president of Gujarat Cold Storage Association, said that 15 per cent increase in the capacity of cold storages over the year is expected to leave 10-30 per cent of the space unutilised in states like

Madhya Pradesh, eastern UP and parts of Punjab where the crops have been below normal this season.

While the Association insists on members charging the minimum rental of Rs 70 per (20) kg bag, instances of certain cold storage owners accepting even less rental of @ Rs 65 and 60 per bag are also reaching here.

Financial Express 16.6.2001

Regulations on import of foodstuff tightened

The government has abolished the system of Port Health office Bond (PHO Bond), a channel that allowed import and instead imposed rigorous norms to check the volume and quality of consignments after the end of most quantitative restrictions.

Even the Mother Teresa-founded Missionaries of Charity, which receives milk powder and other food items sent as donations from abroad, has been told to obtain a Central Food Laboratories clearance that their products meet provisions of the Prevention of Food Adulteration Act (PFA) and the parameters laid down by the Bureau of Indian Standards (BIS).

The PHO Bond system allowed an importer to market food items after sending the results of a sample test on the consignment along with an undertaking to the port health officer.

Central Food Laboratories (CFL) will allow well-equipped laboratories to function as its affiliates to facilitate the testing process, while

its own labs in port towns will serve as an appellate body to interpret and confirm PFA regulations.

This was part of a package of new norms on food imports which was discussed at a 'sensitisation programme' for trade and government departments at the customs office in Calcutta recently. It assumes significance in the light of the end of import curbs.

Senior officials from the Union commerce, health and revenue ministries, local customs and port, representatives of the Missionaries of Charity, clearing agents and importers attended the meeting. Confederation of Indian Food Trade and Industry, (CIFTI), a specialised body of Ficci, also participated. Sister Christy of Missionaries of Charity confirmed her organisation's presence at the meeting but refused comment.

According to estimates, food articles constitute 20 per cent of 714 items on which quantitative import curbs were lifted as part of commitments made to World Trade Organisation (WTO).

Those who attended the meeting were told that selling imported food items without PFA clearance would be a non-bailable offence under the new set of regulations.

Telegraph

19.6.2001

UP unveils policy for mango export

Uttar Pradesh became the first

state in the country to announce a separate policy for encouraging exports of mango. The state government has also announced a subsidy package, Principal secretary of UP government, Rai Singh said on Wednesday.

Financial Express

21.6.2001

Egypt lifts ban on Indian meat, curb on Europe to stay

Egypt, the single-largest buyer of Indian meat, yesterday lifted a three month-suspension on Indian meat imports with effect from June 20. The country had banned Indian meat in March because of a reported outbreak of foot-and-mouth disease (FMD) in India.

Sources said the Egyptian agriculture minister has signed the order to lift the suspension on Indian meat. Egypt has, however, extended the ban on European meat, especially bulk imports from Ireland. This is good news for Indian exporters since Egypt is likely to source a major chunk of its requirements from India. Indian exporters say that the lifting of the Egyptian ban could not have happened at a better time since the season starts in July.

According to market sources, Egypt imports 120,000 - 150,000 tonnes of meat annually. During the January-February period, India had exported over 10,000 tonnes to Egypt monthly.

The lifting of the ban follows a concerted effort by the union ministry of agriculture, Agricultural and

Processed Food Products Export Development Authority (Apeda) and Indian meat exporters.

A high-level Indian delegation comprising officials from the ministry and All India Meat & Livestock Exporters Association (AIMLEA) had visited Cairo soon after the ban was clamped. The Egyptian government had asked the delegation to provide details pertaining to Indian meat exports and quality standards.

"It's a golden opportunity for Indian exporters to increase their market share," says Irfan Allana, chairman of Frigorifico Allana, and president of All India Meat & Livestock Exporters' Association.

Egypt will now continue to source meat from six approved exporters in India three in Maharashtra, two in Uttar Pradesh and one in Andhra Pradesh.

A majority of the 117 meat importing countries have continued their ban on meat imports from Europe. This has left a big void, which Indian exporters are now trying to fill in. Major importers of meat are Australia, New Zealand, the EU, the US, Canada, Argentina and Brazil. India's share in the international meat trade is a meagre two per cent.

According to Mr Allana, a large majority of Indian exports (around 97 per cent) are de-boned, deglanted bone-less buffalo meat. "The meat in India, which has a low pH value of below six and is frozen under minus 40 deg Cel, is the most risk free stuff since no FMD virus can survive in these conditions," says Mr Allana.

Jordan, which banned Indian meat along with Egypt, had lifted the ban on May 1. When Egypt and Jordan banned Indian meat imports, Indian exports fell from 30,000 tonnes per month (in February 01) to less than 15,000 tonnes, according to trade sources.

Economic Times

20.6.2001



Moving up the cold chain

Now with branded food being sold on a large scale, an integrated viable cold chain concept should be developed.

"What you can, you eat, what you can't you Can" has been the adage driving the concept of preserving food in the west. With the development of technology there are better methods of preserving and storage of foods to make it available all through the year.

India is the second largest producer of fruits vegetables in the world accounting for over nine per cent of total global output. But there are inefficiencies in terms of low yields, high levels of wastage and value loss to many intermediaries in the procurement chain and so on.

This is where the post harvest management practices gain importance, especially in the highly perishable foods and vegetable sector. The FAIDA (Food and Agriculture Integrated Development Action) report estimates the loss due to improper handling at Rs 23,000 crore each year which is almost 50 per cent of the production.

This emphasises the urgent need to adopt the concept of cold chain which includes pre-cooling, cold storages, refrigerated transport and air-conditioned outlets. The cold chain helps in keeping the quality of the produce over a long duration, making it available in off-season, helps in avoiding glut and distress sale and support processing industries by assured supply of raw materials.

Up until now India has not developed a viable cold chain. Cold storages were adopted largely to store potatoes, apples and oranges. But the concept of cold chain is almost non-existent with a few exceptions such as the one set up by the Maharashtra grape growers association.

"The cold storage system as set up by the state governments has not taken off because farm store in isolation is not viable. Unless cold chain is converted into a viable business churning out profits, it will not work," says Sridhar K Bhat, chief executive, TEDMAG, a Bangalore based agro industry consultancy firm. According to him the cold chain can be farm-oriented or market-oriented. "Now, when retailing is coming of age and branded food products are being sold on a large-scale, an integrated cold chain can be viable," he adds. Even the thinking at the government level is changing, says Agricultural and Processed Food Products Export Development Authority (Apeda) chairman Anil Swarup, "So far we were intervening at certain stages by providing cold storages. In future we will develop the whole chain, right from seed to the market. How

should a product be harvested, how should it be stored, how to transport them in reefer vans and even special cargo handling facilities at ports to handle fruits and vegetables. We will ensure there are backward and forward linkages".

Although there is a huge gap in production and storage capacity, yet the utilisation is very poor. At present the capacity utilisation rate is only 40 per cent. The reasons that have rendered this business uneconomical include high cost of power tariff, unsuitable location of cold storages and also specialised storages required for different horticultural products. Of the various constraints, electricity is the most important one. Users have cited other reasons such as temperature control, cleanliness, ease of storing, pricing and lack of complete services such as pre-cooling and guarantee.

The power tariff for cold storage units in Karnataka is Rs 3.10 per unit and with the present capacity utilisation it becomes unviable. Consider a cold storage of 500 tonnes capacity. Its power consumption is estimated at 12,500 units and its cost works out to Rs 40,000 per month. In the '00-01 budget, Karnataka government has given a subsidy of Re 1/KWH for the next five years.

But that is not enough says TEDMAG's Mr Bhat. "For the cold chain system to thrive, the corporates must be encouraged to take it up and the government must facilitate it by providing low interest credit and low taxes. At present the taxes are very high. Take for example cold storage equipment.

The excise duty is 16 per cent and sale tax 15.75 per cent which works out to over 30 per cent."

Economic Times 25.6.2001

Investment slow in processed food sector

Investment in the processed food sector is coming at a snail's pace. Government officials say that lack of rural infrastructure is a big roadblock due to which investors, domestic and multinationals, are reluctant to invest large amounts in the sector.

According to official estimates, after the liberalisation of the food processing sector in July 1991, investment till December 2000 has been to the tune of Rs 73,220 crore only. Moreover, the share of foreign direct investment (FDI) in this sector has been around Rs 10,992 crore only.

Estimates show that there has been a Rs 384 crore increase in the total investment from December 1999 to December 2000. But, surprisingly, the FDI inflow has been pegged higher by Rs 1,892 crore at Rs 10,992 crore from Rs 9,100 crore in December 1999. DP Tripathi, secretary, department of food processing industries, told *Business Standard*, "Investment especially large ones, cannot come in until there is a proper rural infrastructure like roads and electricity. These facilities are very essential since all the raw materials, fruits and vegetables are grown in rural areas and they need good roads for transportation and electricity for

development of cold storages and processing."

The sector needs an investment of around Rs 1,40,000 crore of which 50 per cent is needed for creating the right environment from the farm to the markets level for the produce including processing, packaging and marketing with induction of good seeds, technology and research and development, Tripathi said.

This requires a long term association of players with farmers as they will have to assure them that the produce will be purchased regularly and not cyclically, he said.

Business Standard 26.6.2001

DFP to conduct study on fruit export potential

The Department of Food Processing (DFP) has initiated an integrated study to gauge the domestic and export potential of fruits such as mangoes, litchi and pineapples to mention a few.

The study initiated by DFP follows a similar study conducted by the Agricultural and Processed Food Products Export Development Authority (APEDA) four months ago.

Officials in DFP told *Business Line* that the proposed study would be more product specific, as opposed to earlier studies that were area specific.

The Department has advertised for consultant organisations to conduct the study and expects to

finalise the agency by July -end.

The study is scheduled to be completed within three months from the date of awarding the project, he added. The specific fruits, whose potential would be monitored include mangoes, litchi, pineapple, grapes, guavas, citrus fruits and apples.

Besides gauging the export potential, the study is also expected to identify gaps in technology and infrastructure that have hampered growth in the sector.

Business Line 26.6.2001

Eating into food imports

The Central Board of Excise & Customs (CBEC) has issued fresh instructions (Circular no. 36/2001 dated June 15, 2001) for clearance of food products. The major change is that every consignment will be subjected to strict inspection and testing requirements.

Analysis of samples from imported consignments of food items before clearance is a mandatory requirement under the Prevention of Food Adulteration Act, 1954 (PFA). The idea is to eliminate the risk of entry of adulterated /contaminated food articles into the country. The provisions of PFA were rarely required to be invoked when the quantitative restrictions (QR) were in force. However, with the progressive relaxation of QR, this requirement had to be implemented at the entry points.

But, as a practice the customs were not getting samples from all the consignments tested. The

ministry of health and family welfare (MHFW) pointed it out to the CBEC in 1999. In response, the CBEC issued Circular no. 29/99 dated 25.05.99 directing the field formations not to release any food consignment without taking a No Objection Certificate (NOC) from the Port Health Officers (PHO).

Testing each consignment at the Central Food Laboratories and getting an NOC from PHO meant delays in clearing imported food consignments. Even the Ministry of External Affairs highlighted the problems faced by the trade at the Indo-Nepal border. So, the CBEC, in consultation with the MHFW, revised the instructions through Circular no. 103/2000 dated December 15, 2000, according to which, testing each consignment prior to clearance was required only in respect of perishable items like raw meat, fish etc, imported by traders and in respect of high risk mass consumption non perishable items like edible oils, pulses, cereals etc. Perishable items like fruits, vegetables, meat, fish, cheese etc, imported by actual users could be cleared on the basis of certificates from internationally known testing labs or Govt. labs without drawing samples. Nonperishable items, other than high-risk mass consumption items, were subject to only random testing of 5 per cent of the consignments.

These instructions have now been superseded in the wake of the near complete abolition of QR. Now, each and every consignment has to be tested before clearance. In addition, compliance with Meat Food Products Order, 1973, Livestock

Act, Plants, Fruits, Seeds Order and so on should also be ensured. Where necessary, import permits from the ministry of agriculture would also be required.

The earlier instructions to conduct general checks continue. The hold in which the products are transported should be such that storage should not cause any deterioration or contamination. Visual examination should not show swollen or bulged state of the items or any rodent/insect contamination or presence of filth, dirt etc. The product should meet the labelling requirements of PFA Rules and Packaged Commodities Rules. The labels, should show 'best before date' and be written in foreign language and English. The details of ingredients, date of manufacture, batch no. etc. should be mentioned.

Appreciating the possibilities of delays, the CBSE has allowed the consignments to be warehoused under Section 49 of the Customs Act, 1962 till the test reports and NOC are received. If the goods fail to meet the mandatory requirements, they have to be re exported or destroyed.

The government is determined to discourage imports of food products and has built many roadblocks. The same restrictions can delay imports when food is urgently required to cope with shortage.

Business Standard 27.8.2001

Fruit production up in J&K

Nearly 4.70 lakh tonnes of fruit

production is expected in Baramulla district of north Kashmir during the current season. This is 20 per cent more than the production last year.

About 143 hectares of more land are being brought under orchards in the district under the dry land and centrally sponsored programme during the current financial year, official sources said today. For this purpose 20,000 plants of apple and walnut would be provided to the orchardists on 75 per cent subsidy which comes to Rs 10 lakh.

One thousand olive plants were also being distributed among farmers of Uri tehsil free of cost, they said.

To popularise Kashmir fruit, eliminate middlemanship and explore new markets, the Department of Horticulture and Planning and Marketing has taken various measures.

The department operates three markets in Sopore-Baramulla, Parimpora-Srinagar and Narwal Jammu.

Another fruit and vegetable market at Nowpora-Sopore is under construction. It has 700 shop sites, 16 multi-purpose auctions and packing sheds and 70 to 100 kiosks, they said.

To provide sale cover to small and marginal growers, the officials said, the Horticulture Department has established 19 markets, 17 satellite and rural markets and one terminal market, one grain market at a cost of Rs 44.26 crore in which the Nabard loan component is Rs 26.50 crore.

Of these, 11 markets are in Kashmir division and eight in Jammu division.

They said to save the fruit growers from exploitation, the department organised fruit growers cooperative societies which facilitate finance through financial institutions

To provide timely information of market trends of the country to growers and traders, they said, the department is establishing computerised data bank at lower Munda on the Srinagar - Jammu national highway.

The Tribune

3.7.2001

Norms for packaged foods

The Indian consumer's dream of being able to buy imported food products from a local store is slowly becoming a reality. The unlimited choice of foodstuffs is increasing on a day-to-day basis thereby fulfilling a very basic consumer right-that of 'choice'. However to make informed choice, consumers need accurate information. Across all cultures consumers have a right to know what they are buying and a right to decide whether to buy or not based on values they consider important.

Food is not only an agricultural and trade commodity but also an essentially public health issue. As the world market globalises, the eating habits of developing countries are becoming one with those of the developed countries. Consumers are being increasingly exposed to new food technologies and new sources

of food. In several ways most consumers are to differing degrees concerned with and have some knowledge of the quality and safety of the foods they eat. They generally presume that the food offered for sale is safe, while realising that they have no control over certain aspects such as pesticide residues or mycotoxins of food additives. However there is no doubt that a majority of them rely on the government and industry to ensure that the foods meet the standards.

Government's inability

Government intervention is required to protect consumers against overt health risks and to ensure that the quality of foods is the best attainable. Unfortunately with no clear food safety policy and weak domestic food legislation, the government's inability to deal with imported foods is clearly exposed. The problem is further compounded due to the number of government agencies involved in handling imported food products.

The government's Exim policy clearly states that all imported edible/ food products would be covered by the Prevention of Food Adulteration Act (PFA), 1954, which is applicable to food products manufactured and sold domestically. Imported food products will have to comply with the quality and packaging requirements as laid down in the Act before customs clearance.

Some important rules under the PFA concern essential labelling requirements of imported foods such as:

(a) All packaged food to bear the

name and complete address of the manufacturer, packer, vendor and importer.

- (b) Name and trade name of the product.
- (c) Name of the ingredients in descending order of composition.
- (d) Net weight or volume, distinctive batch number or lot number.
- (e) Month and year of packaging in capital letters and the month and year upto which the product is best for consumption and for packaged foods such as milk, bread, bhelpuri, pizza, doughnut, panner and uncanned packages of fruits, vegetables, meat, fish, etc., it is mandatory to print the 'best before' date along with month and year.
- (f) Proper labelling of irradiated foods along with prescribed doses of radiation.
- (g) Prohibits addition of unauthorised colouring matter in any food article.
- (h) Where an extraneous colouring matter, natural or synthetic, is added it must be displayed in capital letters just beneath the ingredients of the label.
- (i) Use of only permitted natural and synthetic colours.
- (j) Use of only permitted natural/ artificial flavouring substances in different food products.
- (k) Display maximum retail price.

The PFA also provides for sampling inspection and confiscation of food items along with the

prescribed penalties. Under section 6(2) the customs collector or any officer authorised by the Central Government can detain any imported package and report such detention forthwith to the Central Food Laboratory. If required he may forward the package or send samples or any suspected article of food therein to the said laboratory.

Further an authorised food inspector can enter and inspect the place where the food article is stored for sale (ware-house) or exposed for sale (distributors or retailers premises) and take samples of those for analysis to check conformation to PFA standards.

While for a majority of consumers in India, imported foods remain largely unaffordable, the temptation to buy something that is imported occasionally is realistic.

However one look at the imported foods on the supermarket shelves is enough to reveal the gross violations of labelling requirements and non-supply of required information to consumers. When buying imported food products consumers must check whether the essential labelling requirements have been fulfilled. More so keeping in mind health risks and lax governmental monitoring.

The Hindu

4.9.2001

Food processing draft policy to be sent to Cabinet

The draft National Policy on

Food Processing will be sent shortly to the Cabinet for its clearance, Mr D.P. Tripathi, Secretary, Ministry of Food Processing Industries, said here on Monday.

Speaking at the valedictory session of the national seminar on the 'Role of the private sector in agricultural marketing', organised by the Federation of Indian Chambers of commerce and Industry (FICCI), he said that the policy is aimed at giving a boost to the processed Food sector.

About 132 million tonnes of fruits and vegetables are produced annually whereas the processing level is only 2 per cent. While 81 million tonnes of milk is produced, only 15 per cent is processed.

Only 7 per cent value-addition is done to food production in India, he pointed out. The wastage in fruits and vegetables amounted to Rs 25,000 crore.

He said that an investment of Rs 1,50,000 crore is required for investment in the food processing sector. Major part of this should come from the private sector, he pointed out.

The private sector should be invited to participate in agriculture produce marketing committees (APMC) and in the setting up of bulk storage facilities and participating in the extension services and credit delivery.

Business Line

4.9.2001

Ministry status for food processing

The Department of Food

Processing Industries has been elevated from a department under the ministry of Agriculture to a full-fledged Ministry.

This was stated here on Tuesday by Mr Chaman Lal Gupta, the new Minister of State (Independent charge) of Food Processing Industries.

He pointed out that the segment could provide jobs to small entrepreneurs and remunerative prices to farmers in comparison to any other organisation with the same investment. With an investment of Rs 1,000 crore, 54,000 jobs could be generated in the food processing sector, he claimed.

Business Line

6.9.2001

Food industry told to adhere to safety rules

The Indian industries, in order to realise their full potential, will have to implement the Hazard Analysis and Critical Control Points, popularly known as HACCP, which can provide a structured mechanism for ensuring food safety at various stages from farms to consumers.

For export markets, it has become inescapable because countries such as Australia, New Zealand, the US, Canada and European Union have either specified or are in the process of making of HACCP mandatory for the processed food suppliers. This consensus emerged at a seminar on promotion of HACCP in food industry organised by the FICCI Quality Forum here on Tuesday.

Mr D.P.Tripathi, Secretary, Department of Food Processing, highlighted the importance of processed food industries for which Government had launched various schemes to upgrade technology. He hoped that EU-FICCI HACCP project would help to prepare food-processing industries for this.

Business Line

6.9.2001

India, NZ agree to collaborate on food safety

India plans to collaborate with New Zealand in the food segment, particularly with respect to processing, safety and standards. New Zealand's Ag Research has agreed in principle to exchange trainees and trainers in food processing and to work with Indian counterparts in the field of food safety and standards, particularly for meat and meat products, according to an official release issued here on Thursday.

This follows the visit of an Indian delegation to New Zealand, led by the Minister of State for Food Processing, Mr Chaoba Singh. Private firms such as Pro & Associates and Fletcher Construction Co are expected to take projects in the country for up-gradation of infrastructure facilities in the sector. Agreements between the two nations in the honey and fruit juice sectors are also in advanced stages of finalization.

CIFTI Digest

July 2001

Kesar mango set to go global

The possibility of 'kesar mango' being exported has increased with the despatch of a 11-tonne export quality consignment. Under a project promoted by the Mango Growers Association (MGA) of Aurangabad, 25 farmers are constantly experimenting and improving the standards for the past five years with technical support and subsidies from the Agricultural and Processed Food Export Development Authority (Apeda), The Maharashtra State Agriculture Marketing Board (MSAMB) and the Marathwada Agricultural University at Parbhani.

CIFTI Digest

July 2001

Milk powder exports to cross 15,000 tonnes

The foot-and-mouth disease (FMD) outbreak in Europe has improved the prospects for export of skimmed milk powder (SMP) from the country. SMP exports are set to cross a record 15,000 tonnes in 2001-02.

Currently, SMP (1.25 per cent butterfat content) of European origin is quoting at \$2,050-2,100 per tonne (f.o.b) while that from Oceania (New Zealand and Australia) is being offered at \$2,050-2,250 per tonne. Compared to this, international SMP prices were ruling at \$1,550-1,650 per tonne f.o.b during this time last year.

The recovery began from around the middle of 2000, following a pick-up in demand from Russia, East

Asia and Latin America, where economies emerged out of severe currency crises of 1997-99. This coupled with the slashing of export 'refunds' on milk powder by the European Union as part of its subsidy reduction commitments to the World Trade Organisation resulted in prices rebounding to their pre-1997 levels.

From being a massive importer, the country ended up being a net exporter during 2000-01. Wholesale SMP prices are now ruling at Rs 74-75 per kg. The country exported an estimated 5,000 tonnes of SMP last year - the bulk of which was undertaken by the Gujarat Cooperative Milk Marketing Federation (GCMMF or Amul). In the current fiscal, GCMMF alone expects to export 7-8,000 tonnes.

CIFTI Digest

July 2001

New technology to delay fruit ripening

Scientists have isolated a gene part, called promoter, from tomato plant and hope to use it in unmodified form for delaying fruit ripening by a technology that can be extended to several other perishable fruits and vegetables. The country does not have proper cold storage and refrigerated transport facilities, which causes wastage of almost twenty per cent of all perishable fruits and vegetables due to rotting.

CIFTI Digest

July 2001

CIFTI's unique Initiative with KOln Messe : The World Leaders in Food Exhibition

Announcing the exclusive International Food Tec India 2002.

For the first time, CIFTI is announcing the exclusive "International FoodTec 2002" with KOlnMesse, the world leaders in Food Exhibition and organizers of the most prestigious ANUGA Food Fair in Koln. CIFTI is the only official Indian Partner to associate with this exclusive event.

The exhibition will especially focus on Food Processing Sector where the exhibitors can show the world a wide variety of products like all processed food items, commodities like rice, pulses, oilseeds, vegetables, fruits, tea, coffee, spices, cashew, milk and milk products, alcoholic and non-alcoholic beverages, meat and fish etc. Apart from this, the exhibition will also focus on Processing Technologies, Ingredients, Packaging Technology, Logistic/Production Transport, Measuring and Regulation Systems, Analytics, Hygiene, Refrigeration Technology, Research and Development.

CIFTI will also organize technical seminars on topical issues during the event, which will be addressed by the most acknowledged and respected experts from the field including industry, government and research organisations and also the international speakers representing the participating companies.

CIFTI Digest

July 2001



Mango exports likely to touch 50,000 tonnes

Exports of mango are likely to rise to 48,000-50,000 tonnes this year before the season ends, Mango exports for the last two years have averaged between 30,000 and 35,000 tonnes. Mangoes from India are exported traditionally to the Gulf, with a small percent going to Europe. This year Indian mangoes will also find their way to southeast Asian countries such as Malaysia and Singapore.

CIFTI Digest

July 2001



Comprehensive Processed Food Act

The Associated Chambers of Commerce and Industry (Assocham)



has called for the enactment of a comprehensive Processed Food Development Act that would replace the multifarious legislations and regulations governing the sector.

In a submission to the Government, the chamber has called for an "umbrella legislation" that would also address export and import regulations on genetically modified foods, create a futures market and an enabling environment for attracting large doses of foreign direct investment (FDI) into the sector.

The chamber has pointed out that there are over 20 legislations, both at the Centre and the States, which are currently regulating the growth of the sector

Business Line

5.7.2001



Patenting of Amla

Council of Scientific & Industrial Research (CSIR) has taken the steps for development of a traditional knowledge base Digital Library which would be made available to the various Patent Offices so that granting of patents on the known uses of traditional products can be prevented.



INDUSTRY NEWS

Mother Dairy set for wider splash

The Rs 900-crore Mother Dairy will be launching its operations outside Delhi (National Capital Region) by the first week of April 2002. Initially the operations will be limited to 20 cities in six North Indian states. The states are J&K, Himachal Pradesh, Punjab, Haryana, Uttar Pradesh and Rajasthan. The process of appointing distributors is on.

In all the 20 cities, we already have launched vegetable products such as vegetables, pickles and jams. In some places we are in the process of appointing fresh distributors while somewhere we will be using our existing vegetables distributors, " said a senior dairy official.

Initially Mother Dairy will be launching mixed product range in these 20 cities, starting with flavored milk, as well as most of the ice-cream, lassi and sweets varieties. "We will first try and give consumer value added services. Once the consumer is satisfied with our product then he would like to try more from our kitty". Whether Mother Dairy finally goes national will depend on the success in the northern cities. "We will closely monitor the market in these 20 cities for a year and then decide which other parts of the country we

should launch our products," the official said. "Our main aim will be to become the market leader in all these 20 cities and once we establish ourselves in these cities, then we will be looking at smaller towns and villages nearer to these cities."

Economic Times

12.7.2001



Bikanervala munches on global pie

Amul storming the MNC pizza bastion in India this week has found a kindred soul in the Bikanervala group. The Rs 100 crore *bhujia* and *chaat-papri* major is planning westward march for their famous savouries and will be opening its first international outlet in Toronto soon, thanks to the Canadian Government's call for entrepreneurs to set up shop there.

Speaking to ET from Canada's premier business hub, SS Agrawal managing director of the Bikanervala Group said, "Now you get pizzas and burgers all over India due to all those MNC chains. We want to do the reverse-serve Indian cuisine to foreign consumers. And hopefully we'll begin doing just that very soon when our first outlet of Bikanervala will open here in Toronto."

Cosmopolitan Toronto's sizeable NRI component would, of course, be

a huge potential market to begin with, which Agrawal agrees will be a "major asset". So much so that Bikanervala Group has plans to open 8 to 10 more outlets in North America in a year's time, at a total cost of Rs 35 to 40 crore.

"Soon authentic *chat-papri*, *namkeen* and sweets will be available in Canada," says Agrawal. "Initially, we will export *namkeens*, spices and semi-finished ingredients for sweets there. As the outlet becomes fully operational we will try to make the items in Canada. In fact Toronto may be the sourcing centre for our other outlets later."

Bikanervala is no stranger to foreign markets, as it has been exporting *namkeen* worth 2 crore to US, UK, Canada, France, Dubai, Australia and South Africa. Domestically the ISO 9002 company is expanding. "We are planning 25 Bikanervala points in Delhi, starting with the launch of our first on Rakhi-August 4. If all goes well we will increase the number to 40 by the year-end," says Deepta Gupta, GM operations, Bikanervala. Bikanervala will serve whatever is now found in Bikanervala outlets already.

Gupta says Bikanervala points will be 400 to 500 sq ft, totally air-conditioned franchised outlets. "We will add an ice-cream parlour, whose products will be outsourced from Supreme Enterprises. Our prices,

of course, will be very competitive and our flavours very different from our counterparts."

The plan is to have a Bikaner point every 5 km, covering the whole of Delhi. "Our main objective is to ensure that a consumer can get all Bikaner items right at his door step," added Gupta. That certainly should see an expansion of the chaaterati segment.

Economic Times

12.7.2001



Vadilal's branded frozen food to sell in US, Canada & UK

After 10 years of exporting its products as commodities, Vadilal Industries Ltd has now launched its own brand of frozen foods in the North American and British market.

The Vadilal Quick Treat brand has been a year in the making. With Identity Communications providing inputs on package design and advertising, and the company finally launched the product through newly appointed distributors in the USA, Canada and UK last month.

Says Vadilal Managing Director Rajesh Gandhi, "We have been testing this market for some time now and have concluded that future prospects are quite bright it was time to invest in our own brand." Targeted primarily at non-resident Indians the Vadilal Quick Treat range consists of 60 products, including vegetables like okra, yam, gourd, cluster beans and fenugreek leaves. For those who prefer the heat and eat mode, the brand offers frozen

parathas, chapattis, dalmakhni, palak paneer, sarson ka saag and several Gujarati specialties.

Vadilal uses quick freeze technology for its Quick Treat range, which is why these products are not being introduced in the domestic market says Mr Gandhi, who is also the Chairman of the Agro-Processing Committee set up by Gujarat Chamber of Commerce & Industry and CII. "At present, the domestic cold chain network is not adequate for the distribution of such products. Even the best supermarkets do not have enough deep freezer capacity."

The Ahmedabad based company has been exporting frozen fruits and vegetables to industrial buyers like ice cream and yoghurt manufacturers for some time now.

Last year, out of total sales of Rs 105 crore, around Rs 25 crore was through processed food exports, with the rest coming from ice cream.

In domestic market, Vadilal has been marketing its brand of frozen peas and corn, but distribution has so far been restricted to Gujarat and Maharashtra.

The Quick Freeze brand has been allocated an initial advertising budget of Rs 40 lakh, which will be focused on TV channels subscribed to by NRIs in the USA, Canada and UK. There are plans to expand distribution to the Middle East and the rest of Europe in the near future.

Economic Times

12.7.2001



Frooti in bottle: Parle Agro to take Coke, Pepsi head on

The market leader's proposed plan is aimed at unlocking growth opportunities in this category.

If Coke and Pepsi in India thought that they have seen the last of the Chauhan brothers of the Parle group in the bottled soft drinks marketplace, they had better think again! For Mr Prakash Chauhan's Parle Agro Ltd is exploring the option of launching its leading fruit drinks brand, Frooti, in bottles. This then, would bring Frooti in direct competition with Coke's Maaza and Pepsi's Mangola. Frooti already exists in carton packs and is the market leader in this category with an estimated 80 per cent share.

Company officials say that Parle Agro's plan to launch Frooti in bottles is aimed at unlocking growth opportunities in this category, given the fact that Frooti has already achieved the requisite stretch in terms of carton packs.

According to Parle Agro chairman and managing director Mr Prakash Chauhan, the Digen Verma advertising campaign has clicked for Frooti. The idea behind launching a teaser campaign followed by a massive advertising binge, was aimed at strengthening Frooti's top-of-the-mind brand recall.

Meanwhile, with the launch of N-Joi-a milk-based mango drink in Pune and Chennai, Mr Chauhan says that Parle will extend the brand to other dairy products in the future. "N-joi will be used as the umbrella brand for our dairy products

foray. N-joi will be launched in Mumbai and other markets in August-September this year," he says.

The company would also explore the option of extending Frooti into other fruit based drinks.

Parle Agro has already attempted at attacking 'affordability' as an issue in the mineral water market by introducing Bailey at the Rs 3.50 price point. Bailey is also being pushed through an expansion in a number of depots and delivery points through three-wheelers.

The company is in the middle of expanding its penetration of Bailey. The number of outlets, which were expended last year from two lakh to 2.60 lakh, will further go up to 2.65 lakh outlets this year. Mr Chauhan informed.

The Rs 383-crore Parle Agro derives a major part of its turnover Rs 250 crore from carton packed fruit drinks (Frooti) and the balance Rs 108 crore comes from Bailey.

The Rs 700 crore water market is said to be registering a growth of 60-70 percent over the last one year. Parle International expects to register a growth of 50 per cent in water next year.

Of the total mineral water market size of 32 million cases per annum. Bailey currently has a market share of 22 per cent. Bisleri leads with a share of 48 per cent and Aquafina and Kinley with market shares of around 3-4 per cent respectively.

Financial Express 24.7.2001

Tasty Bite rolls South Indian range

Tasty Bite Eatables Ltd (TBEL) has announced the launch of its new range of South Indian delicacies. Six new variants have been added to Tasty Bite's existing range of ready-to-eat North Indian entrees and curry sauces. Tasty Bite's South Indian offering include *Bisi bele Bhath* (Mysore Sambar Rice); *Khara Bhath* (Bangalore Vegetable Upma); *Puliyodare* (Tanjore Tamarind Rice); *Avial* (Malabar Mixed Vegetables); *Pongal* (Madras lentil rice) and *Kesari* (Madurai Kesari Halwa).

Available in 285 gm packs, these products are without preservatives and can be stored without refrigeration for 18 months.

Financial Express 25.7.2001

◆ ◆ ◆ Britannia proposes to expand product mix

Britannia Industries Ltd has proposed to focus more on its dairy business in the coming years by introducing new, value added, milk-based products.

The company had decided to expand its product-mix, keeping in view the changing tastes of the consuming population, Mr Nusli Wadia, Chairman of Britannia Industries, said. He was addressing the company's AGM held on Saturday.

Britannia, which currently sourced milk from Maharashtra, had been affected by an increase in milk prices in that State. Prices, however, did not increase similarly in other

parts of the country.

On the biscuits front, the company had seen its volumes go up by 11 per cent over the previous year, topping the 2,000-tonnes mark. 'Tiger' its flagship brand, managed to increase its market share during this period.

Britannia has acquired a new trade mark in Karnataka-'Kwality' from Kwality Biscuits. The acquisition, it is hoped, would help increase the company's presence in the southern markets. Along with the trademark, copyrights and label designs have also been taken over. It has also decided in principle to buy 49 per cent equity of Kwality Biscuits. This will be done during 2001-02 itself.

Mr Wadia said Britannia had not remained insulated from developments affecting the fast moving consumer goods sector. Topline growth in the case of FMCG majors had been 'fairly limited' during the previous quarter.

The company, given the current market scenario, had targetted a 6-8 per cent sales growth for this fiscal. It would try to maintain the growth rate through cost cutting and better harnessing of its management skills, it is pointed out.

For 2000-01, the company has recorded a sales growth of 14.4 per cent, with both bakery operations and the new dairy business contributing to the advancement. Its operating profit went up by 37 per cent. Earnings per share recorded an increase to Rs 25.33 from Rs 18.31 in the previous year.

Mr Wadia expressed concern at what he called was a "contradiction" - the recent increase in excise duty and the wastage of wheat in government warehouses. He was referring to the last Union Budget, which raised the duty for certain critical items.

"This, we feel, is a contradiction especially so in the context of so much wheat being eaten by rats", Mr Wadia added.

Business Line 29.7.2001



Godrej Foods on restructure path

The business of the Rs 406 crore Godrej Foods Ltd (GFL) are being demerged.

The manufacturing business along with its marketing, sales, finance and other related divisions of GFL is being merged with Godrej Industries Ltd (GIL). Post merger, GFL will be left with the trading business.

The boards of the two companies which met today, decided on a share swap ratio of one share (face value Rs 6) of GIL for every 15 shares (face value Rs 10) of GFL will stand reduced to Re 1 per share.

According to an official of the Godrej Group this decision stems from the fact that GFL is not doing well. "If these businesses continue to remain with GFL, a recovery will not be possible," he said.

GFL has manufacturing facilities at Wadala, Mumbai, Bhopal and Mysore. It is involved in the

manufacture and marketing of edible oils and fruit drinks under the brand name Jumpin and Xs. The company's brands will now be owned by GIL.

According to the official, the balance sheet strength of Godrej Industries will facilitate ease of borrowings and a reduction in its debt burden for these divisions to be merged.

The appointed date for the merger is June 30, 2001. The scheme of arrangement is subject to various approvals. GFL will continue to be listed on the exchanges.

Godrej Industries, which was demerged from Godrej Soaps Ltd, has reported a 22 per cent decline in its net profit at Rs 11.18 crores for the quarter ended June 30, 2001 as against Rs 14.40 crore in the year-ago period.

Income from operations dipped to Rs 105.09 crore from Rs 199.41 crore. The previous year's figures include all the business of the erstwhile Godrej Soaps Ltd. When compared division to division, GIL's income from operations has risen by 10 per cent. Other income stood at Rs 0.11 crore (Rs 0.70 crore)

Business Line 29.07.2001



Coke reshuffle leaves India cold

Coca-cola India's heady run as an important arm of the Atlanta-based multinational appears to be over. Following a restructuring in the company's top brass in the Atlanta headquarters today, the Indian subsidiary has been downgraded.

Another layer has been added as a buffer between the president and chief operating officer of the Asia group and the CEO of the India group apparently for a "closer scrutiny of The Indian Operations". Until now, the head of India group was directly reporting to the president and COO of Asia.

Patrick Siewert, who recently jointed Coke from Kodak, will now be in charge of the East and South East Asia group, which includes India. Therefore, come September, the Coca-Cola India CEO, Alex Von Behr would report to him.

Mr Siewert in turn would report to Mary E Minnick, who has been appointed as the president and chief operating officer in place of Sandy Allan, who takes over as president and chief operating officer Europe, Eurasia and Middle East group. ET tried to contact at least three senior officials, including the Coca-Cola India CEO. But none of them were available for comment on the development.

Economic Times 31.7.2001



Bel plans 100% arm in India

Global cheese producer, Bel, wants its brands to become the most favored nibble in India. The Laughing Cow brand has already made inroads in Delhi and Mumbai households and once it reaches a critical mass, Bel plans to set up a 100 per cent subsidiary in India. The idea is to use the country as a manufacturing hub for 100 per cent vegetarian cheese which will

also cater to Japan, Vietnam, Middle East, Bangladesh and Pakistan markets. Instead of setting up a manufacturing facility, Bel plans to tie-up with contract manufacturers. The company will provide technical support to the manufacturer. But that will happen only next year. For the time being Bel's liaison partners in India are bringing in two more cheese brands: Kiri and Babybel. Kiri has a cream base and Babybel is a semi hard cheese, understood to be hugely popular among kids in the European markets. Since Bel wants to promote cheese as a snack food to be nibbled anytime and not just as a breakfast accompaniment, kids will be its target consumers.

Bel has long known that mealtimes are not the only occasions when people enjoy cheese. Hence, it wants to bring about a radical shift in the way cheese is consumed in India, sources said. Once the brand goes national early next year, all communication strategies will revolve around kids and their frequent hunger pangs.

Industry analysts said that it will not be a cakewalk for Bel after all. It will have to compete with heavy duty brands like Amul and Britannia which have enormous brand equity in the market. One also hears of Nestle joining the fray soon. Bongrain of France is already there with the Le Bon cheese brand.

Economic Times 3.8.2001

Heinz ketchup turns

purple for kids

Heinz is adding Funky Purple to its crayon box of condiment colours.

The company, hoping to build on last year's success with a Blastin Green ketchup, said the new purple ketchup would be on store shelves in September.

In seven months, H.J. Heinz Co sold more than 10 million bottles of green ketchup, pushing up the total sales by 5.4 per cent and helping the Pittsburgh company boost its share of the American ketchup market to 59 per cent from 55 per cent immediately prior to green ketchup, spokesman Mr Michael Mullen said.

While the marketing campaign aimed squarely at children, the green ketchup came in a new EZ Squirt plastic squeeze bottle, specially designed with a narrow nozzle to let kids paint their food with precision.

Heinz promises the ketchup keeps the company's signature taste and recipe, with a little Blue No.1 and Red No.3 thrown in to shade the condiment. The company still makes its traditional red.

Next month, kids armed with Heinz EZ Squirt bottles will be able to draw Harry Potter lightning bolts on hot dogs and rendering of a certain big purple dinosaur on hamburgers.

"Purple is one of the hottest colours for kids right now. In an era when kids can't get enough monsters and wizards, the bold, powerful,

colour purple has reached new heights of popularity," said Mr Jay de Sibour, president of the Colour Marketing Group, a not-for profit international association of designers. It's consistently a kid favorite.

Business Line

3.8.2001

Tea cola adds fizz to soft drink market

Celebrate Camellia is a swadeshi cola with a difference. It is carbonated black tea, that has hit the Coimbatore market after its launch at the recent Agri Intex Fair 2001.

Available in two flavours - lemon and mango the drink takes the colour of Coke /Pepsi but for the flavour and taste.

Ms Sashikala, the entrepreneur who developed this instant tea formula, calls it a "millennium drink and a safe refresher". The drink is targeted at the youth.

"They have taken an instant liking for Pepsi and Coke so I evolved this drink with a natural base - tea leaves, But the presentation is typical - the fountain Pepsi way", she told *Business Line*.

She said the overwhelming response for the drink has attracted leading players to market the product. The drink prevents headache and helps in proper functioning of blood vessels, she claimed. Also, the anti-oxidants present in the tea fight the virus causing influenza and the poly phenols prevent cancer, she added. Ms Sashikala said it had taken

about five years to perfect the product. At room temperature, it has a shelf-life of six months. Also, she has blended Assam and South Indian teas to get the refreshing taste. The instant tea has not taken off to a good start in India, because consumers prefer brewing it. But the new fountain tea, market sources said, is expected to change that trend.

Business Line

8.8.2001

PepsiCo forms units for beverages, snacks

PepsiCo Inc has unveiled a new corporate structure designed to take advantage of scale and efficiencies it hopes to reap from last week's more than \$13 billion acquisition of Quaker Oats Co.

Under the new organisation, the Tropicana juice business will report to the Quaker Chief Executive officer, Mr Bob Morrison, who will help oversee distribution of Tropicana in the same system that has helped Gatorade grow as the dominant sports drink in the country.

In adding to Tropicana, Mr Morrison, who also serves as vice-chairman of PepsiCo, will oversee Gatorade and Quaker food operations and distribution in North America.

New York based PepsiCo said Tropicana will remain headquartered in Bradenton, Florida. The Tropicana Chief Executive, Mr Brock Leach, will report to Morrison.

PepsiCo said it will form a new unit called Persico Beverages International that will fold Pepsi's

three international beverage units into one under the oversight of Mr Peter Thompson, who has headed the international operations since 1996.

A new Frito-Lay International unit will be headed by Mr Rogelio Rebolledo, principal architect of PepsiCo's international snack business, the company said.

That unit will combine PepsiCo's Europe-Africa-West Asia, Latin America-Asia and Pacific Australia units with the Quaker snack and food businesses outside North America

Business Line

10.8.2001

Coconut cola to lure generation next

Miracle Food Processors International Ltd in Perintalmanna of Kerala has found a way to take on the cola giants - it has launched concentrated tender coconut water, that can be diluted and carbonated before serving.

The company has combined its in-house technology with that of a West German company, Winter Technologies Zentrum GMBH, to produce and market the product under the brand name Zat's.

The German company has invested Rs 88 lakh in the project by way of equity and for the cost of machinery supplies.

Mr P.P Ahamed Kutty, Managing Director, Miracle Food, told *Business Line* that he is also promoting the concept of franchisee operation in major cities. These franchisees will

use the concentrate to make 3,000 bottles a day, that will be carbonated.

Mr Kutty said the company was set up in 1996 to produce and export pineapple based products at an investment of about Rs 4.5 crore. The KSIDC, KFC and the National Horticulture Board pumped in Rs 1.4 crore, while Risk Capital and Technology Finance Corporation, a Government of India outfit, gave Rs 30 lakh as venture capital. The rest of the investment was made by Mr Kutty and his associates.

However, when samples of the pineapple-based products were sent to Germany, they were rejected as traces of pesticides were found. The company then started manufacturing concentrated coconut water. After a lot of research, the company finally developed the concentrate that could withstand room temperature for 18 months. The company also makes coconut jam.

The company gets its supply of tender coconuts from the Malabar region. Each such nut yields 150-200 ml of sweet coconut water. Most of the raw material was procured from Malabar region in Kerala, he said.

Mr Kutty said the company was forced to use food fairs to market its products due to lack of financial resources. So far, it has got orders from Germany, the US, South Africa and Mauritius.

Miracle Food has the capacity to process 10,000 liters of coconut water per day. But it is now utilizing only 35 per cent of its capacity because of lack of orders.

The MRP of 1kg coconut concentrate is Rs 200 (which gives 55-60 glasses of 200-ml coconut water). A 350-gm coconut jam jar costs Rs 35 and 500 gm jar comes for Rs 47. For longer shelf -life, all products are being sold in bottles.

Business Line

10.8.2001



Meat exports set to expand further

The country's meat exports, which nearly doubled last year from 1999, are expected to rise further in the current calendar year and are likely to maintain the tempo next year too.

From 1.67 lakh tonnes in 1999, meat exports rose sharply to 3.00 lakh tonnes in 2000. Besides increased exports to traditional markets in West Asia, Malaysia, Thailand and Mauritius, there was significant increase to relatively new African markets such as Egypt, Gabon etc due to their bans on European Union meat imports.

This has boosted 2001 export prospects to 3.75 lakh tonnes, according to a report of the US Department of Agriculture (USDA) which said trade sources forecast India's 2002 meat exports to 4.10 tonnes, especially if supported by improved access to the Russian market.

Meat and meat projects exports are permitted subject to periodic inspection by the Agricultural and Processed Food Products Export Development Authority (APEDA), the nodal agency monitoring meat exports.

Improved fodder supplies and better prices for meat animals are expected to boost cattle/buffalo populations by about two per cent in 2002, the report said. Preference for water buffaloes (which make up 45 per cent of the bovine population) continues to increase due to the higher fat yield of their milk, their ability to thrive on inferior rations, and the expanding export market for a carabeef (buffalo meat).

Unlike for cattle, most states have fewer restrictions on the slaughter of buffaloes, thus allowing the growth of this largely export-driven meat sector. Although the slaughter of cows is banes in all but two states due to religious sensitivities, some illegal slaughter does occur, USDA pointed out.

Use of commercial feeds in the meat and dairy sectors is extremely low as most herds consist of just a few animals, dependent upon locally available feedstuffs. The continued capitalization of the dairy and meat-export sectors is expected, however, to lead to the greater use of commercial feeds, the report observed.

Livestock slaughter remains mainly a small-scale operation, done in street corner shops in an unorganized manner. This responds to strong consumer preference for freshly slaughtered meat. The market for fresh/chilled meat is weak, and most consumers continue to have a negative view of frozen meat.

Business Line

11.8.2001



Genetically modified food

yet to receive approval

The government today said approval had not yet been given for commercial release of genetically engineered food in the country.

This was stated in the Rajya Sabha by Minister of State for Food Processing, Chaoba Singh who said even in developed countries including in Western Europe authorities were insisting on labelling genetically modified food for giving informed choice to the countries.

The minister said in Colombo, the products were so far banned.

On genetically engineered rice, Mr Singh said though the Department of Biotechnology was undertaking a joint research project on Golden Rice with Switzerland, there was no proposal to introduce the rice in the market.

His ministerial colleague, Mr Shripad Y Naik said, over the past three years there had been fall in production of onion, garlic and ginger and that Center had taken up integrated programmes on boosting production of these items.

He said there was no on-going agitation anywhere in the country against aquaculture, though from time to time notices had been received both for and against shrimp farming.

Mr Naik ruled out any government plan to give direct subsidies to exporters of agricultural commodities. India has demanded the rationalization of the product coverage of the Agreement on Agriculture in the World Trade

Organisation by including primary commodities like rubber, jute and coir under the pact.

This information was given by Minister of State for Agriculture Shripad Y Naik.

He admitted that the natural rubber has been classified in the WTO Agreement as an industrial product and cotton as an agricultural product.

Deccan Herald

1.8.2001



Tang to be made in India

Fresh packaging, co-promotion on the cards.

Five months after it officially brought Tang powdered soft drink on domestic shop counters, KJS India Pvt Ltd (a 100 per cent subsidiary of Philip Morris), is set to kick off local production of the brand.

Mr Ajit Sahgal, Director, KJS India, said the company's production based in Hyderabad, set up on an overall capital investment of nearly Rs 30 crore, was nearing completion.

"Commercial production of Tang will begin in September. Just after the monsoon", Mr Sahgal said. However, at the time of Tang's official launch in March this year, Mr Sahgal had specified that local production would commence by June. On the sales front, Tang has been facing a mixed bag of fortunes. While the brand has been rolled out in seven cities instead of the four as planned originally owing to 'high

acceptance' even in second -tier cities, the brand's volume sales have been below expectations. "Monthly sales have been 30 per cent below target," Mr Sahgal said.

He attributed Tang's slow volume take-off to the summer months being unusually pleasant in the northern states, which also impacted Coca-Cola and Pepsi.

KJS plans to introduce Tang in additional pack sizes to facilitate deeper penetration. "Our immediate plan is to tap in-house consumption", Mr Sahgal said.

The brand is currently available in single-serve 25 gm sachets priced at Rs 7, and in 500 gm pouches and jars priced at Rs 100 each.

Meanwhile, Tang will be extended to flavours other than the existing orange only late next year, Mr Sahgal said. These are likely to be lemon, mango and imli.

The company's immediate plans are to enter into a series of co-promotion deals with FMCG brands. "We are in talks with FMCG brands with whom we share the common platform of nutrition and taste," Mr Sahgal said, even as he declined to divulge details.

The total domestic beverage market in 2001 is expected to be 33.3 billion litres. 25 per cent of which comprise out-of-home consumption. While the in-home hot beverages market is estimated at 38 per cent, that of in-home cold beverages market is estimated at 37 per cent.

Tang falls in the in-home cold

beverages category, which stands at 12.1 billion litres. Powdered soft drinks comprise only 0.2 per cent of this market.

While KJS India has entered into a revenue sharing, three year agreement with Dabur Foods Ltd to distribute Tang, Mr Sahgal did not comment on whether Dabur Foods would also distribute Kraft Foods forthcoming launches in India.

KJS India had also received FIPB approval in 1996 for establishing agro-based food processing ventures in India.

Business Line

15.08.2001



Ritz, Oreo entry soon

The 60- year-old Ritz crackers brand may soon be spotted on local shop counters.

"It will be a matter of time before we bring in these brands," Mr Sahgal said, though he refused to spell out a specific time frame for the same.

In the international markets, Ritz is available in four varieties as original crackers, with reduced fat, low sodium and as crisps. Another brand that may stage an Indian entry sooner than expected is Oreo cookies.

Ritz, Oreo and Chips Aboy - originally Nabisco Holdings brands - are now part of the Kraft Foods operating companies umbrella, thanks to world wide acquisitions.

Business Line

15.8.2001



BUSINESS OPPORTUNITY

Kazakishtan wishes to establish Joint Ventures with Indian Industry in the following identified areas:

Wheat production, selection of crops, exchange of germ plasma, livestock production, production, processing and storage of agricultural products, reconstruction of projects for processing & storage, Agricultural machinery development for biotechnology for restructuring, deserting process. Development of system for agricultural production in extreme conditions, poultry, fishery, meat and meat products, grain

products, baby food, dairy items, soyabean processing.

Interested persons may contact Mr. Jose Thomas, Under Secretary to the Govt. of India, Ministry. of Food processing Industries, Panchsheel Bhawan, August Kranti Marg, New Delhi - 110 049

◆ ◆ ◆
M/s Sadia Group a poultry food manufacturer in Brazil is keen to export their poultry products into India in collaboration with India

Companies. They also have plans to set up a production base in India and export to South Asian Countries, Russia etc. For this purpose, they would like to enter in a joint venture.

Interested persons may contact Mr. Wilson Joji Arikita, Commercial Manager, Sadia S.A. Rua. Fortunato Ferraz, 659-05093-901, Sau Paula, S.P. Brazil Tel 5511-3649 1534 Cel 551199819790 Fax 551136493344 Email: ID Wilson. arikita@sadia.com.br.

◆ ◆ ◆

CD ROM on 'Strategies for becoming a Customer Driven Organisation

FICCI has developed a new CD -ROM on "Strategies for becoming a customer driven organisation". The CD is an invaluable resource for on-line training and development of personnel on the following aspects:-

1. Institutionalizing customer focus and building strong commitment by strengthening internal and customer service-profit chain.
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3. Improving organisation's competitiveness by building capabilities in spotting opportunities and innovating new products & services through application of scientific tools and techniques.

The CD is priced at Rs. 9500/- but under a special drive a discount of Rs. 1000/- is offered.

Interested persons may send Rs. 8500/-, in favour of "FICCI Quality Forum" payable at New Delhi to FICCI Quality Forum, FICCI, Federation House, Tansen Marg, New Delhi- 110 001.
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E-mail : ficci@ficci.com : fqt@vsnl.net, Website : <http://www.ficci.com>.

FAIRS & SEMINARS

India International Trade Fair, November 14-27, Pragati Maidan, New Delhi

The above world famous trade fair will be organised by India Trade Promotion Organisation (ITPO). Exhibitors from all over the country will participate. The Industry will focus their products and have business relations with other countries.

Persons/Industries who wish to participate in this fair may contact India Trade Promotion Organisation (ITPO), Pragati Maidan, New Delhi - 110001.

16th Economic Development Conference, 24 November 2001, New Delhi

Institute of Trade and Industrial Development is organising its 16th Economic Development Conference on 24th November, 2001 at 11.00 am. at FICCI Golden Jubilee Auditorium, Tansen Marg, New Delhi. The Theme of the Conference is 'Revival of Indian Industry in the Era of Globalisation'.

The delegate fee of Rs. 500/- to be sent in favour of "

Institute of Trade and Industrial Development' by 12th November, 2001.

Interested persons may contact Radhey Shiam, Director, Institute of Trade & Industrial Development, 364, Deepali, Pitampura, Delhi - 110034 Tel :- 7010617 fax : - 7016643 E-mail itid@satyam.net.in

Training Program on filling of patent application through PCT

Institute of Intellectual Property Development (IIPD) is organising the PCT filling training program along with World Intellectual Property Organisation (WIPO), Geneva and Ministry of Commerce & Industry as per the following schedule:

i) Nov. 5-6, 2001 Mumbai at World Trade Centre, Mumbai, ii) Nov. 8-9, 2001 Cochin, at Hotel Trident, Cochin, iii) Nov. 12-13, 2001, Ahmedabad at Hotel President, Ahmedabad, iv) Nov 16-17, 2001, Hyderabad, at Hotel Green Park, Hyderabad.

The participation fee is Rs. 4000/- per participant (Rs. 2500/- per participant for IIPD Members and in case three or

more people are nominated from a single organization). Interested persons may contact Ms. Gazai Kapoor or Ms. Anwesha Prabhu at 3738760 extn. 368 at Delhi.

Foodpro - 2001

The 4th Indian Food & Food Technology Fair December 8 - 11, 2001, Chennai Trade Centre, Chennai, India

The exhibit profile will cover:

- Food & Food Processing
- Dairy
- Meat & Poultry
- Beverages
- Bakery & Confectionery

for Further Details, Contact : J.Shanker / K.S.V. Kuppuswamy

Confederation of Indian Industry Business Fairs Division, 35/1, Abhiramapuram 3rd Street, Alwarpet, Chennai - 600 018, India. Ph.:91-44-4987648/49/4660571/0570/1311/0291/0773, Fax : 91-44-4660312.

E-mail : j.shanker@ciionline.org/ v.kuppuswamy@ciionline.org. Website

www.foodpro2001.com

SIAL 2002, (The Global Food Market Place) October 20th to 24th - 2002, Paris, France

The above food fair is being held in Paris like every year, where a large number of industry members from all over the world participate.

If you are interested to join, please contact Mr. Jose Thomas, Under Secretary, Ministry of Food Processing Industries, Panchsheel Bhawan, August Kranti Marg, New Delhi - 110 049



Aahar - 2002, March 6-10, 2002, Pragati Maidan, New Delhi.

India Trade Promotion Organisation is organising the 17th Aahar International

Exhibition for Food Processing and Related Equipment, hotel and Restaurant Equipment and supplies in Pragati Maidan, New Delhi.

This fair is being supported by AIFPA. Many foreign countries will be participating and displaying their products in this fair. It is an important fair for joint venture with other countries.

Interested persons may contact AIFPA, 206, Aurobindo Market Complex, Hauz Khas, New Delhi-110016, Tel : 6510860, 6518848; Fax : 6510860, E-mail : aifpa,.@.vsnl.net



International Food Tech India, 9th to 12 February, 2002, Chennai.

The first International Food Tec India will be held from 9th

to 12th February, 2002 in Chennai to offer an extensive platform to the booming food processing industry in the country. This fair will bring together the technological product ranges from all areas of food processing, thereby providing cross-sector information for Indian and International exhibitors.

Germany will be represented at the fair by a national participation sponsored by the German Ministry of Economics and Technology (BMWI).

Interested persons can obtain detail on the internet at : www.foodtecindia.com



PLACEMENT SOUGHT

Shri Arun Kumar is a well trained and qualified Quality Controller, having 25 years experience, worked with NAFED as Production Incharge. He has obtained M.Sc. from Agra University (Specialisation in Organic Chemistry).

Shri Arun Kumar is available for suitable service. He may be contacted at: CC-126, D, Sharlimar Bagh, Delhi - 110 088, Tel : 7492159

GOVT. CIRCULARS

PRESS INFORMATION BUREAU

GOVERNMENT OF INDIA

STRATEGY FOR FULL USE OF NEW DEVELOPMENTS IN BIOTECH

New Delhi Sravana 15, 1923

August 06, 2001.

The Department of Biotechnology (DBT) has put into effect a new strategy to harness the latest developments in biotechnology for increasing agricultural production including eradication of malnutrition and improvement of health-care. The Department has taken up this initiative in association with other scientific and technological Departments, State Governments, non governmental organisations and the private sector for implementing several projects and programmes in this regard.

Necessary infrastructure and expertise have been developed to improve crop varieties through genetic engineering and molecular marker assisted breeding strategies. Tissue culture techniques have also been evolved for mass multiplication of elite planting material of horticulture and plantation crops. In plant genomics, India is a partner in the International Rice Genome Programme. A protein-rich transgenic potato is under field trial.

Efforts are also on to produce biological products, vaccines and diagnostics using recombinant DNA technology for improving productivity and disease resistance in farm animals. In aquaculture and fisheries, diagnostics and vaccines for some diseases have been developed.

In the area of health-care, the emphasis is on the development of new generation vaccines for prophylactic and therapeutic use, diagnostics, drug delivery systems and production of improved biologicals and biomedical products. An immunomodulatory therapeutic vaccine for leprosy has already been released for commercial production. Autonomous institutions like the National Institute of Immunology, National Centre for Cell Sciences, National Brain Research Centre, Centre for DNA Finger Printing and diagnostic and the National Centre for Plant Genome Research are contributing towards generation of knowledge as also services and products. Realising the importance of plant-based medicines, programmes have also been taken up for the development of new molecules, drugs, prospecting of new genes and the whole field of pharmacogenomics.

GOVERNMENT OF INDIA
MINISTRY OF COMMERCE & INDUSTRY
DEPARTMENT OF COMMERCE

NOTIFICATION No. 20 (RE -2001)/1997-2002
 NEW DELHI, the 27th July, 2001.

S.O.(E) In exercise of the powers conferred by Section 5 of the Foreign Trade (Development & Regulation) Act, 1992 (No.22 of 1992) read with Paragraphs 1.3 and 4.11 of Export and Import Policy, 1997-2002 (incorporating amendments made upto 31.3.2001), the Central Government hereby makes the following amendments in the ITC (HS) Classification of Export and Import items, 1997-2002 (incorporating amendments made upto 31 August, 1998) as amended from time to time:-

In continuation of Notification No. 16 (RE-2001) 1997-2002 dated the 26th June, 2001, the following additions shall be made against the Code No. 0703(I) in Table B of Schedule 2 of the said ITC (HS) relating to "onions (all varieties other than Bangalore Rose onion and Krishnapuram onions)" under the column "nature of restriction" :-

"Further, another 50,000 (Fifty Thousand) Metric Tonnes of onions is allowed for export through the following agencies/State Trading Enterprises for the quantities indicated against each:-

1.	National Agricultural Cooperative Marketing Federation of India Ltd (NAFED).	17,500 M.T.s.
2.	Maharashtra State Agricultural Marketing Board (MSAMB)	17,500 M.Ts.
3.	Gujarat Agro Industries Corporation Ltd. (GAIC)	5,000 M.Ts.
4.	The Spices Trading Corporation Ltd. (STCL)	2,000 M.Ts.
5.	AP-State Trading Corporation	2,500 M.Ts.
6.	The Karnataka State Co-operative Marketing Federation Ltd (KSCMF)	2,000 M.Ts.
7.	The National Co- operative Consumers Federation of India Ltd (NCCF)	2,500 M.Ts.
8.	The Northan Karnataka Onion Growers Co-operative Society	1,000 M.Ts.

2. These STEs/agencies shall export directly or through the Registered Exporters on the same terms and conditions as laid down in earlier Notification No. 16 (RE -2000) / 1997-2002 Dated 17.05.2000 except condition relation to time prescribed for export for which the date indicted in Para-3 will apply.

3. The quantity of onions released as above shall be exported by 31st August, 2001.

4. It has further been decided to extend the shipment period of the unutilized balance quantity of the onion, if any, out of the 50,000 Metric tonnes released for export vide Notification No. 16 (RE -2001)/1997-2002 dated the 26th June, 2001 upto 31st August, 2001.

5. This issues in Public interest.

(N.L.LAKHANPAL)

DIRECTOR GENERAL OF FOREIGN TRADE
AND EX-OFFICIO ADDL. SECRETARY TO THE GOVT. OF INDIA

Press Information Bureau
Government of India

EXPORT OF WHEAT AND RICE

New Delhi : August 20, 2001

The current export policy provisions for export of wheat, rice and pulses are as under :

- (i) Wheat : Export are allowed freely subject to quantitative ceiling announced by DGFT and issue of Registration -cum-Allocation Certificates (RCACs) by APEDA. For the year 2001-02, an export ceiling of 5 million tonnes of wheat has been announced.
- (ii) Basmati and Non-Basmati Rice : Exports are allowed freely subject to registration of contracts with APEDA. For the year 2001-02, export of 3 million tonnes of rice has also been permitted out of the stocks held by FCI for the Central Pool.
- (iii) Pulses : Exports are allowed freely in consumer packs upto 5 kg.

It is not possible to estimate the likely quantum and values of wheat, rice and pulses that will be exported during the current year as the exports would depend upon international demand and supply position, domestic demand and supply position, international and domestic prices, consumer preference and varieties traded.

As per available information, the production of wheat, rice and pulses during the last 3 years has been as under :-

Year	(Quantity in Million Tonnes)		
	Wheat	Rice	Pulses
1998-99	71.29	86.02	14.89
1999-2000	75.57	89.48	13.35
2000-01(Advance)	68.55	85.50	11.72

(Source : Directorate of Economics & Statistics)

In view of the huge surplus of foodgrains available with FCI over and above the buffer stock norms the local market is not likely to get affected.

FOOD STANDARDS

Executive Committee of the Codex Alimentarius Commission (Twenty-fourth Session), 2-7 July 2001 Geneva, Switzerland.

Provisional agenda items discussed at the meeting are :

- Report by the Secretariat on relations between the Codex Alimentarius Commission and :-

- (a) Other international inter-governmental organization.
- (b) International non-governmental organizations.
- (c) Reports on the Revision of Regional Diets and Information on Processing.

Consideration of matters arising from FAO and WHO Conferences and Governing Bodies

which includes FAO Conference on Food Trade beyond the Year 2000 (Melbourne, October 1999), the 30th Session of FAO Conference (Rome, November 1999) and the 53rd Session of the World Health Assembly (May 2000).

- Consideration of the Draft Strategic Framework, Proposed Draft Medium-Term Plan 2003-2007.
- Risk analysis policies of the Codex Alimentarius Commission.
- Consideration of proposed

amendments to the Procedural Manual of the Codex Alimentarius Commission.

- Consideration of Codex standards and related texts.
 - a) Draft standards and related texts at Step 8 or equivalent
 - b) Proposed draft standards and related texts at Step 5.
 - c) Proposals to elaborate new standards and / or related texts.

Codex Committee on General Principles 16th Session, Paris, France, 23-27 April 2001.

The Committee :

- Agreed to ask the advice of the Commission on how to proceed with the Proposed Draft Working Principles for Risk Analysis, as regards their Scope and the use of precaution in risk management;
- Endorsed the amendment to the Terms of Reference of the Codex Committee on Food Hygiene and provisions concerning the selection of methods of analysis for inclusion in the Procedural Manual;
- Agreed to inform the Commission that there was no consensus at this stage on either the amendments to the composition of the Executive Committee or the alternative of holding sessions of the Codex

Alimentarius Commission on a yearly basis, as provided for in Rule IV.1, and abolishing the Executive Committee.

- Agreed on a number of criteria for the integration of " other legitimate factors" in the Codex decision process in relation to risk analysis.
- Agreed to ask for further comments on the Proposed Draft Revised Code of Ethics for International Trade in Foods and to consider it further at its next session;
- Agreed to forward to the Commission the proposed amendments to the Rules of Procedure concerning the membership of regional economic integration organizations and to inform the Commission of the discussions held on the subject.

Codex Committee on Food Labelling 29th Session, Ottawa, Canada, 30 April -04 May 2001 .

The Committee :

- Advanced the Draft Sections on beekeeping and additives in livestock production in the Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods and the Proposed Draft Amendment to the adopted Guidelines

(Substances for Use in Soil Fertilizing and Conditioning) for final adoption by the 24th Session of the Codex Alimentarius Commission; and agreed to undertake the revision of the section of the Guidelines on Criteria for the development of lists of substances used in organic production;

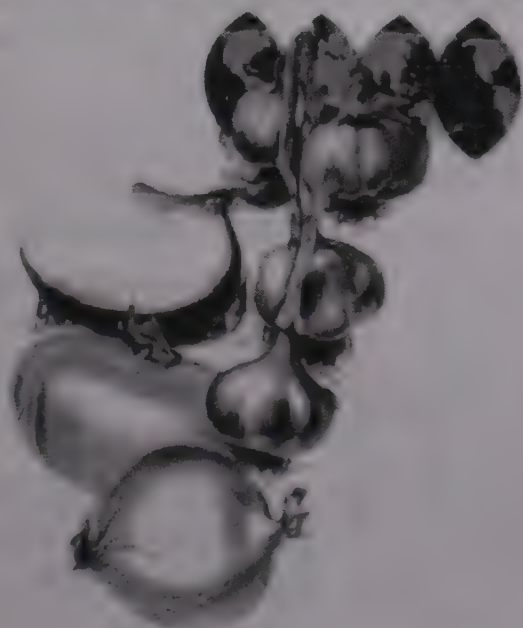
- Advanced the Draft Definitions for adoption by the 24th Session of the Commission the returned the Proposed Draft Guidelines for the Labelling of Foods obtained through Certain Techniques of Genetic Modification /Genetic Engineering for further

comments:

- Agreed to ask for further comments on the Draft Amendment to the Standard for the Labelling of Prepackaged Foods (class name-milk protein);.
- Endorsed the labelling provisions in several draft standards for processed fruits and vegetables; fresh and fishery products; chocolate and cocoa products; bottled/ packaged waters; soups and broths; and vegetable protein products, with some amendments, thereby allowing their adoption by the 24th Session of the Commission;

- Agreed to ask for further comments on the Proposed Draft Amendment to the Guidelines on Nutrition Labelling (list of nutrients), as amended during the session;
- Agreed to ask for further comments on the Proposed Draft Recommendations on Health Claims, as amended during the session.
- Agreed to ask for further comments on the Proposed Draft Amendment to the General Standard for the Labeling of Prepackaged Foods on Quantitative Declaration of Ingredients.

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| ● Dehy. Potato Powder | ● Dehy. Potato Cubes / Fingers |
| ● Dehy. Carrot Cubes | ● Dehy. Carrot Powder |
| ● Dehy. Cabbage Flakes | ● Dehy. Cabbage Powder |
| ● Dehy. Mint Leaves | ● Dehy. Green Chilli Powder |
| ● Dehy. Mint Leaves Powder | ● Dehy. Spinach (Palak) Powder |
| ● Dehy. Tamarind Powder | ● Dehy. Sweet Neem (Curry) Leaves |
| ● Dehy. Karela | ● Dehy. Sweet Neem (Curry) Powder |
| ● Dehy. Tomato Powder | ● Dehy. Kasuri Methi Leaves |
| ● Dehy. Coriander Leaves | ● Dehy. Kasuri Methi Powder |
| ● Dehy. Coriander Powder | ● Dehy. Raw Mango (Amchur) Powder |

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RESEARCH ARTICLES

STUDIES ON CHANGES IN FLAVOUR PROFILE AND SENSORY QUALITY OF INSTANT VEGETABLE *PULAV* MIX

A. D Semwal, G. K. Sharma, A Padmashree and S. S. Arya
Defence Food Research Laboratory
Mysore - 570011

ABSTRACT

Instant vegetable *pulav* mix based on precooked dehydrated rice, fried potatoes, fried green peas and blending with spices and seasoning was developed. The changes in flavour profile and sensory quality of instant vegetable *pulav* mix packed in polypropylene (PP) and paper-aluminum foil-polyethylene laminate (PFP) were monitored during storage in order to assess the shelf-life of the product. After 9 months of storage, the losses in flavouring compounds ranged from 5.8 -70.0% and 5.8-80.0% at room temperature (RT) and 37°C respectively. Instant *pulav* mix remains stable for 9 months both in PP and PFP at room temperature and 9 and 6 months at 37°C in PFP and PP respectively

INTRODUCTION

During combat operations and when deployed in small formations or at places where supply of fresh food materials are logistically not feasible, troops are issued operational pack rations¹. In order to meet the requirement of Armed Forces, instant vegetable *pulav* mix based on rice, potatoes and green peas capable of reconstitution with mere mixing with hot water has been developed. The reconstituted *pulav* scored 8.3 ± 0.1 overall acceptability score with respect to colour, taste, aroma and texture. Changes in the flavour of foods during storage are the most serious limitations to shelf life of the product,

which in turn affects consumer acceptance. The changes in flavour may emanate from a number of factors such as interaction of packaging materials, absorption of malodorous compounds from the storage environment, non-enzymic browning reactions, storage temperature and time². As the instant vegetable *pulav* mix contains a number of spices, changes in the flavouring constituents of these spices play a major role in the sensory quality of the product. Therefore, in the present investigation, changes in the major flavouring constituents of spices of instant vegetable *pulav* mix were monitored during storage and correlated to the sensory score in

order to estimate the shelf-life.

MATERIALS AND METHODS

Preparation of instant vegetable *pulav*

Instant vegetable *pulav* mix was prepared by the method reported earlier³.

Preparation of spice mix :

Commercially available good quality whole spices were procured from local market. The whole spices were cleaned and powdered in an ultra centrifugal mill (Retsch R1, Germany) using 1mm sieve. Spice mix was prepared by mixing star-anise (*Illicium verum*) powder (5g), clove (*Eugenia caryophyllus*) powder

(2g), cinnamon (*Cinnamomum zeylanicum*) powder (3g), black cardamom (*Amomum subulatum*) powder (3g), cardamom (*Elettaria cardamomum*) powder (2g), red chilli (*Capsicum annum*) powder (62g), turmeric (*Curcuma longa*) powder (16 g), *tezpat Cinnamomum tamala*) powder (1g) and citric acid (6g).

Blending : *Vanaspati* (750g) was heated in a stainless steel vessel to 120°C and spice mix (225g), salt (225g), whole black pepper (30g), cloves (30g) and *tezpat* leaves (15g) were added to hot *vanaspati* with continuous mixing. The vessel was removed from the flame and precooked and dried rice (5kg), fried potatoes (1.25kg) and fried peas (1.5kg) and were added into the hot spice mix and stirred continuously to ensure uniform coating of the spices.

Packaging and storage : Instant vegetable *pulav* mix (100g) was packed in polypropylene (PP, 75 μ) and paper (42 GSM)- aluminium foil (20 μ) - polyethylene (37.5 μ) laminate pouches (8x10cm) and hermetically sealed. Ten pouches of each type were stored at room temperature (15-35°C) and 37°C. Initially and after every three months, two samples of each type were removed and analysed for changes in flavour profile and sensory characteristics.

Extraction of flavour : Flavour from instant vegetable *pulav* mix (50g) was extracted by simultaneous

distillation extraction (SDE) method using diethyl ether (50ml) as a solvent. Extract was concentrated by gently blowing nitrogen gas over the surface of extract and volume was made to 100 μ l.

Capillary Gas Chromatography (GC) : Capillary GC analysis was carried out on a Chemito 1000HR gas chromatograph (Chennai, India) as per the method of Sharma et al⁴ with slight modifications. Separation was achieved on a 30m x 0.25 mm id DB-5 column. The oven temperature was programmed from 35°C-215°C at 5°C/min (10 min hold). The injector and detector temperatures were 215°C and 250°C respectively. The hydrogen carrier gas flow rate was 1.05ml/min an injector splitter at a split ratio of 30:1. Sample injection volume was 1 μ l.

Capillary Gas Chromatography-Mass Spectrometry (GC - MS) : Electron-impact mass spectrometric data were collected on a Finnigan MAT GC-MS (San Jose, USA). The column and GC condition were same as described for GC analysis except helium gas was used as carrier at a flow rate of 30 cm/sec. The mass spectrophotometry was operated at an ionisation voltage of 70eV, ion source temperature 200°C and transfer in temperature 250°C. Sample components were verified by comparison of the mass spectra data matching with NIST library and also with the retention time of the

authentic standards.

Reconstitution and sensory evaluation: One hundred gram sample of instant vegetable *pulav* mix was treated in 300 ml of boiling water and stirred for 5 minutes. Initially and after regular intervals, the instant vegetable *pulav* was given to a panel of 15 trained judges for grading for colour, taste, flavour and overall acceptability on a 9-point hedonic scale with 9 for 'excellent' in all respects and 1 for 'highly disliked sample.'

RESULTS AND DISCUSSION

Instant vegetable *pulav* mix had moisture 5.2 $\pm$ 0.2%, protein 7.0 $\pm$ 0.2%, fat 20.1 $\pm$ 0.4%, total carbohydrates 62.6 $\pm$ 0.5%, total ash 5.1 $\pm$ 0.3%, total carotenoids 18.8 $\pm$ 0.5 μ g/g and chlorophyll 4.8mg/100g. Based on the above composition, its total energy value works out to be 460 KCals/100 g and therefore it is sufficiently calorie dense and highly suitable for operational pack rations. The volatile aroma concentrate obtained by the SDE method closely resembled the aroma of fresh vegetable *pulav*. The result of GC-MS analysis of volatile flavour components of spices present in vegetable *pulav* mix is presented in Tables 1 and 2, Fifteen main spice flavouring compounds were identified in instant vegetable *pulav* mix and their relative concentrations were monitored during storage at room temperature (Table 1) and 37°C (Table

2). Freshly processed instant vegetable *pulav* mix contains mainly eugenol 29.2%, eugenol acetate 6.5%, α -terpenyl acetate 6.2%, cinnamaldehyde 5.2%, cineole 4.9%, linalool 4.5%, β -pinene 3.6% α -pinene 3.2%, terpene 4-ol 3.1%, cuminaldehyde 1.6%, geraneol 1.3% and boroneol 1.0%, while p-cymene, α -terpinene and β -carryophyllene were present less than 1%, in vegetable *pulav* mix. During storage the losses flavouring compounds were more pronounced at 37°C than at room temperature. As expected, at both the temperatures, the retention of flavouring compounds were higher in PFP than in PP pouches. After 9 months of storage the losses in flavouring compounds ranged between 19.2-80.0% and 5.8-46.2% in PP and PFP pouches at RT and 37°C respectively. After 9 months of storage at 37°C in PP and PFP, only 65.4 and 77.1% eugenol, 49.2 and 61.5% eugenol acetate, 61.3 and 72.4% α -terpenyl acetate, 76.9 and 94.2% cinnamaldehyde, 61.2 and 73.5% cineole, 35.6 and 66.7% linalool, 69.4 and 77.8% β -pinene, 68.7 and 81.2% α -pinene, 35.5 and

67.7% terpene-4-ol, 37.5 and 68.7% cuminaldehyde, 30.8 and 53.8% geraneol, 20.0 and 70.0% boroneol, 33.7 and 55.6% p-cymene, 64.6 and 79.2% α -terpinene and 52.9 and 76.5% β -carryophyllene were retained respectively.

Changes in colour, taste, aroma and overall acceptability of reconstituted instant vegetable *pulav* mix at RT and 37°C are given in Tables 3 and 4. Freshly prepared instant vegetable *pulav* mix had an overall acceptability score 8.3 on 9 point hedonic scale and therefore a score of 7.0 was taken as the lowest limit of acceptance and termination of shelf-life. The changes in sensory score was least at 0°C followed by RT and 37°C. After 9 months of storage, the changes in overall acceptability score of instant vegetable *pulav* ranged 8.3-7.0 and 8.3-7.5 at RT whereas the range was 8.3-7.0 at 37°C on a 9 point hedonic scale in PP and PFP respectively. Instant vegetable *pulav* mix remains stable up to 9 months both at RT and 37°C in PFP and also had a useful shelf-life of 6 months in PP at 37°C.

The above study revealed that instant vegetable *pulav* mix remains stable and acceptable up to 9 months both at RT and 37°C, when packed in PFP. As accepted the losses in flavoring constituents and changes in overall acceptability score of instant vegetable *pulav* mix were more pronounced at 37°C than RT.

ACKNOWLEDGEMENT

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Attention Exporters

The United Arab Emirates (UAE) have laid down the following conditions which has been made mandatory for all canned/packed food exports to U.A.E.

"That all the Canned/Packed Food Processors are hereby asked to include the name of the preservative being added in the canned food, in the list of ingredients prominently displayed or printed on the packing. Moreover the preservative has to be herbal and not a chemical"

Table -1. Changes in the flavour constituents of instant vegetable *pulav* mix stored in polypropylene (PP) and paper-aluminium foil-polyethylene (PFP) laminate at room temperature (RT)

Flavouring constituents	Initial Concentration	Relative Concentrations(%) [*]					
		3 months		6 months		9 months	
		PFP	PP	PFP	PP	PFP	PP
α -pinene	3.22	3.01	2.82	3.00	2.81	2.73	2.41
β -pinene	3.60	3.43	3.23	3.32	3.01	3.04	2.70
α -terpinene	0.48	0.44	0.41	0.42	0.35	0.39	0.30
p-cymene	0.92	0.84	0.71	0.84	0.63	0.61	0.42
cineol	4.90	4.50	4.05	4.22	3.53	3.81	3.13
linalol	4.54	4.37	4.02	4.04	3.40	3.53	2.60
terpene-4-ol	3.11	2.82	2.22	2.73	1.72	2.42	1.13
boroneol	1.00	0.90	0.70	0.81	0.53	0.80	0.31
cuminaldehyde	1.63	1.56	1.26	1.43	1.01	1.22	0.82
geraneol	1.34	1.23	0.92	1.00	0.72	0.90	0.61
β -caryophyllene	0.34	0.33	0.30	0.30	0.27	0.28	0.22
cinnamaldehyde	5.21	5.01	4.61	5.03	4.52	4.90	4.21
α -terpenyl acetate	6.22	6.07	5.73	5.54	5.08	5.13	4.40
eugenol	29.21	28.14	26.42	26.93	25.16	24.42	22.31
eugenol acetate	6.56	6.13	5.46	5.60	4.73	5.24	4.11

* Values are mean of three determinations, maximum variation did not exceed 2% of the mean.

Table -2. Changes in the flavour constituents of instant vegetable *pulav* mix stored in polypropylene (pp) and paper-aluminium foil-polyethylene (PFP) laminate at 37°C

Flavouring constituents	Initial Concentration	Relative Concentrations(%) [*]					
		3 months		6 months		9 months	
		PFP	PP	PFP	PP	PFP	PP
α -pinene	3.22	3.09	2.82	2.94	2.60	2.62	2.20
β -pinene	3.60	3.55	3.16	3.22	2.83	2.86	2.53
α -terpinene	0.48	0.42	0.40	0.40	0.35	0.38	0.31
p-cymene	0.92	0.83	0.60	0.62	0.43	0.51	0.31
cineol	4.90	4.38	3.80	3.82	3.24	3.62	3.01
linalool	4.54	4.06	3.52	3.31	2.19	3.03	1.64
terpene-4-ol	3.11	2.72	2.06	2.50	1.52	2.17	1.10
boroneol	1.00	0.81	0.55	0.83	0.46	0.73	0.22
cuminaldehyde	1.63	1.44	1.02	1.23	0.87	1.11	0.60
geraneol	1.34	1.07	0.74	0.93	0.54	0.72	0.42
β -caryophyllene	0.34	0.32	0.29	0.28	0.25	0.26	0.18
cinnamaldehyde	5.21	5.07	4.57	5.01	4.38	4.98	4.03
α -terpenyl acetate	6.22	5.63	5.08	4.73	4.05	4.55	3.82
eugenol	29.21	27.54	24.20	25.02	20.43	22.54	19.11
eugenol acetate	6.56	5.76	4.82	4.30	3.52	4.01	3.20

* Values are mean of three determinations, maximum variation did not exceed 2% of the mean.

Table -3. Changes in colour, aroma, taste and overall acceptability of instant vegetable *pulav* mix packed in PP at RT and 37°C.

Storage period (months)	Storage temperature (°C)	Colour	Aroma	Taste	Overall acceptability
0	—	8.4±0.2	8.3±0.1	8.2±0.1	8.3±0.1
3	RT	8.0±0.2	7.7±0.2	7.8±0.1	7.8±0.2
	37	7.6±0.1	7.4±0.2	7.5±0.2	7.4±0.2
6	RT	7.7±0.3	7.4±0.1	7.5±0.1	7.5±0.1
	37	7.2±0.2	7.1±0.1	7.0±0.1	7.0±0.2
9	RT	7.2±0.1	7.1±0.2	7.1±0.1	7.1±0.2
	37	6.8±0.2	6.6±0.3	6.4±0.2	6.5±0.2

Mean of fifteen values ± SD.

Table -4. Changes in colour, aroma, taste and overall acceptability of instant vegetable *pulav* mix packed in PFP at RT and 37°C.

Storage period (months)	Storage temperature (°C)	Colour	Aroma	Taste	Overall acceptability
0	—	8.4±0.2	8.3±0.1	8.2±0.1	8.3±0.1
3	RT	8.1±0.2	8.0±0.1	8.0±0.2	8.0±0.2
	37	7.8±0.1	7.7±0.2	7.9±0.3	7.7±0.2
6	RT	7.9±0.3	7.8±0.2	7.8±0.2	7.8±0.3
	37	7.5±0.2	7.4±0.1	7.3±0.1	7.3±0.2
9	RT	7.6±0.2	7.5±0.3	7.5±0.3	7.5±0.2
	37	7.2±0.1	7.1±0.2	7.0±0.1	7.0±0.1

Mean of fifteen values ± SD.

EFFECT OF STAGE OF APPLE POMACE COLLECTION AND THE TREATMENT ON THE PHYSICO-CHEMICAL AND SENSORY QUALITIES OF POMACE TOFFEES

N. K. Kaushal, V. K. Johsi and D. Vaidya

Department of Postharvest Technology
Dr YS Parmar University of Horticulture & Forestry
Nauni-Solan (HP) 173230

ABSTRACT

Preparation of toffees from apple pomace collected at three different stages at one month interval (Aug=I, Sept=II & Oct=III) with three ratios of sugar to pulp ($T_1=1:1$, $T_2=1:1:25$ & $T_3=1:1:5$) is reported. The physico-chemical and sensory quality of the toffees prepared from apple pomace was affected by the stage of apple pomace collection, viz., total soluble solids, reducing sugar, starch and pectin which was highest in stage I, while titrable acidity was highest in stage II. Based on physico-chemical and sensory evaluation, the product from stage II of apple pomace collection and treatment three (T_3) was found to be the best for toffee preparation. All the quality parameters increased except total soluble solids and total sugars which were reduced from T_1 to T_3 . T_3 treatment was ranked as excellent in sensory quality. The TSS, sugar (reducing and total) and acidity increased whereas non-reducing sugar, starch and pectin decreased significantly at various storage intervals. The product remained acceptable for the whole period of 6 months storage under ambient conditions. The changes recorded in storage of apple pomace toffees were similar to those observed normally for similar products. The cost of production indicated that preparation of apple pomace toffees would be a profitable venture.

INTRODUCTION

India occupies an important place among the apple producing countries of the world, confining production of the fruit to its northern states including H.P. [1, 2]. The tremendous increase in apple production yielding a lot of cull fruits has necessitated to devise ways and means for the complete utilization of the crop. A portion of crop is utilized in the preparation of

juice, juice concentrate, jam, jelly, sauce and fermented products [3, 4, 5]. In apple juice production, pomace is the primary by-product constituting about 25 per cent of the fresh fruit [6, 7]. Because of biodegradable nature with high biochemical oxygen demand (BOD), disposal of apple pomace into environment causes pollution necessitating the efforts to find out

appropriate solution to this urgent problem [7, 8]. But commercial utilization of pomace shall ultimately be determined by the economics of products and the cost of waste disposal coupled with the pressure from environment protection agencies in implementing the laws [8].

Efforts have been made in the past to extract pectin from apple pomace [9] or to make citric acid

[3, 7]. An innovative approach for the recovery of ethanol and production of animal feed concomitantly has also been advocated [10, 11]. Efforts made to utilize it in the preparation of edible products like apple pomace jam, sauce and cookies have also been successful [12, 13, 14]. But the large quantity of apple pomace produced suggests that preparation of a single product would not be economically feasible and production of all possible products needs to be explored. As a part of the detailed study toffees were prepared from apple pomace of different stages (collection of pomace) with different treatments. The changes during storage of toffees were also studied. Results obtained have been described in this communication.

MATERIALS AND METHODS

Apple pomace pulp preparation:

Apple pomace was collected from HPMC Fruit Processing Plant, Parwanoo, Solan (HP) at three stages viz. August (Stage I), September (Stage II) and October (Stage III). It was converted into apple pomace pulp by the addition of water in different ratios and 1:3 ratio was optimised [15]. The pulp was made after boiling the pomace with requisite amount of water and then pulping through a pulper.

Apple pomace toffees : Toffees were prepared from apple pomace pulp. Three sugar-to-pulp ratios were used viz., T_1 (1:1), T_2 (1:1:25) and

T_3 (1:1:5). The other ingredients used were glucose (15g), skimmed milk powder (30g), vegetable ghee (30g) and citric acid (3.5g) per kg of the pulp and they were common to all the treatments. The pulp was heated for 4-5 minutes followed by addition of sugar, glucose and skimmed milk powder. The whole mass was concentrated to 80-82° B which was spread as a sheet of one cm thickness on fat smeared flat trays and dried for 2 hours. Toffees of desired size and shape were cut and wrapped in cellophane papers for storage at ambient conditions for further analysis.

Physico- chemical analysis : Total soluble solids were measured by hand refractometer from the solution of the toffees (solution was prepared by dissolving specific amount of toffee in water) and multiplying the reading by dilution factor. Titrable acidity and sugars were estimated by Lane and Eynon's volumetric method [16]. Starch and pectin contents were determined by the methods given by Ranganna [17].

Sensory evaluation: Sensory analysis of the toffees was conducted by a semi-trained panel at different intervals by composite scoring test [17]. Grading was done based on the absolute scores as 'Non-accepted' (<10), 'C' grade (10-12), 'B' grade (12-14), 'A' grade (14-16) and excellent grade (>16).

Statistical analysis : The data of

quantitative estimation of physico-chemical characteristics of toffees were analysed by CRD while the date of sensory evaluation were analysed by RBD as described by Mahony [18]

RESULTS AND DISCUSSION

Effect of stage of pomace collection :

The data (Table 1) showed that the physico-chemical as well as sensory characteristics of the apple pomace toffees were affected significantly by different stages of pomace collection. Total and non-reducing sugars increased significantly from stage I to stage III, while starch and pectin contents decreased. The total soluble solids were highest in stage I and lowest in stage II while the titrable acidity was highest in stage I and lowest in stage II. Starch and pectin contents differed apparently due to the stages of maturity of apple fruit used in juice processing as these parameters are affected by stage of fruit maturity (19). Sensory characteristics, viz., colour, flavour, texture, taste and absence of defects were also affected significantly in toffees prepared from apple pomace collected from different stages. For taste, stage I (at par with stage II) scored the highest. Furthermore, when absolute scores of different sensory attributes were considered, all the products remained in grade 'A' or 'Excellent grade'.

Effect of treatment : Table 1 also indicates that different treatments (T_1 , T_2 and T_3) affected the physico-

chemical characteristics of apple pomace toffees, significantly. Total soluble solids and total sugar decreased while titrable acidity, starch and pectin increased from T_1 to T_3 , which was evidently due to the increasing pulp-sugar ratio as per the recipes tried. Significant effect of treatment on sensory attributes i.e. colour, texture, flavour, taste and absence of defects was also reflected in the results obtained. It is also clear from the Table that average scores for all the attributes increased from treatment T_1 to T_3 . Product from T_3 was adjudged to the best.

Effect of different storage period:

The data (Fig. 1) indicate that the storage period had significant effect on physico chemical parameters of the toffees. In general, an increasing trend was recorded in total sugar, reducing sugars and titrable acidity while non-reducing sugars, starch and pectin declined during the storage. The increase in total and reducing sugars and decrease in non-reducing sugars and starch was apparently due to the hydrolysis of starch and conversion of non reducing sugars into reducing sugars during the storage as reported²⁰ earlier in the storage of apricot jam. The increase in TSS and titrable acidity could be attributed to the loss of moisture from the surface of the toffees during storage. Increase in brix-acid ratio, as shown in Figure 1, is the consequence of the same effect. Decrease in pectin content might be the result of conversion of pectin into soluble fractions as

reported in six months storage of muskmelon jam²¹.

Based on the data on the effect of different storage periods on the average scores for different sensory characteristics, it is apparent that storage periods significantly affected the average score for all the sensory characteristics studied. Furthermore, the average score decreased significantly during storage for all the attributes. Observations on the outer surface of the toffees showed it to be more dry than the central portion which might have resulted in lower scores awarded to the product after storage. This phenomenon could be due to the loss of moisture from outer surface of the toffees. However, still the product was scored with 'A' grade. Overall analysis of the results of storage revealed that the changes observed during storage of the apple pomace toffees are those which normally take place during storage of such products. Similar findings on the changes during storage of apple pomace sauce have been reported earlier also¹². It indicates the potential of the product for human consumption. However, maintenance of strict hygienic conditions in collection of apple pomace and its preservation for off-season use need to be emphasized. It could be concluded from the results that the product (apple pomace toffees) from stage II and treatment T_3 was the best. Furthermore, apple pomace toffees could be stored for at least six months period without deterioration.

The economic analysis (Table 2) showed that toffees produced from apple pomace would be far cheaper and could easily find market. The cost of production of toffees could not be compared directly as no such product prepared out of apple, is available in the market at present. However, comparison with mango toffees showed that toffees of apple pomace were far cheaper than the comparable products available in the market. The lower cost of production is attributable to the low cost of the basic raw material i.e. apple pomace. In brief, amongst the other propositions for profitable utilization of apple pomace, preparation of apple pomace toffees holds promise.

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Table 1 : Effect of stage of pomace collection and the treatment on the physico-chemical and sensory characteristics of apple pomace toffees

Characteristics	Apple pomace toffees							
	I	Stage II	III	CD _(0.05)	T ₁	T ₂	Treatment T ₃	CD _(0.05)
Physico-chemical								
Total soluble solids(°B)	88.67	86.28	86.35	0.02	87.30	86.66	85.38	0.02
Total sugars (%)	77.7	78.05	78.15	0.03	78.33	77.94	77.70	0.03
Reducing sugars (%)	47.42	46.79	46.41	0.03	46.79	46.85	46.65	0.03
Non reducing Sugars(%)	28.79	29.62	30.15	0.009	29.63	29.46	29.47	0.009
Titration acidity (%)	0.24	0.27	0.26	0.003	0.24	0.25	0.27	0.003
Starch(%)	1.24	1.17	1.02	0.005	1.10	1.14	1.19	0.05
Pectin(%)	3.90	3.52	3.18	0.005	3.16	3.55	3.89	0.005
Sensory								
Colour	15.98	16.15	16.01	0.17	15.39	15.49	17.26	0.17
Texture	15.15	15.24	14.96	0.17	14.51	14.85	16.02	0.17
Flavour	15.66	15.98	15.31	0.18	14.91	15.16	16.89	0.18
Taste	15.90	15.87	15.48	0.19	15.06	15.52	16.66	0.19
Absence of defects	14.47	15.01	14.50	0.20	14.21	14.35	15.43	0.20

Table 2 : Cost of production of apple pomace toffees

Particulars	Quality	Rate(Rs)	Amount (Rs)
Apple pomace pulp	13.33 kg	0.40 /kg	05.33
Sugar	8.90 kg	10.00/kg	89.00
Citric acid	55.50 g	55.00/ kg	03.05
Fact/shortening	300 g	40.00 kg	12.00
Glucose	170 g	80.00/kg	10.20
Skimmed milk powder	335 g	50.00/kg	18.75
Cellophane sheets	20 cellophane sheets	2.00/ c.sheet	40.00
Cost of ingredients			176.33
Processing cost @20%			35.36
Overhead charges @ 20%			35.36
Total Cost			246.85
Profit @20%			9.34
Total yield			296.22
			10kg
Cost per unit (kg)			29.62
Market price			80.00
			(Mango toffees)
Profit (Comparative)			50.00%

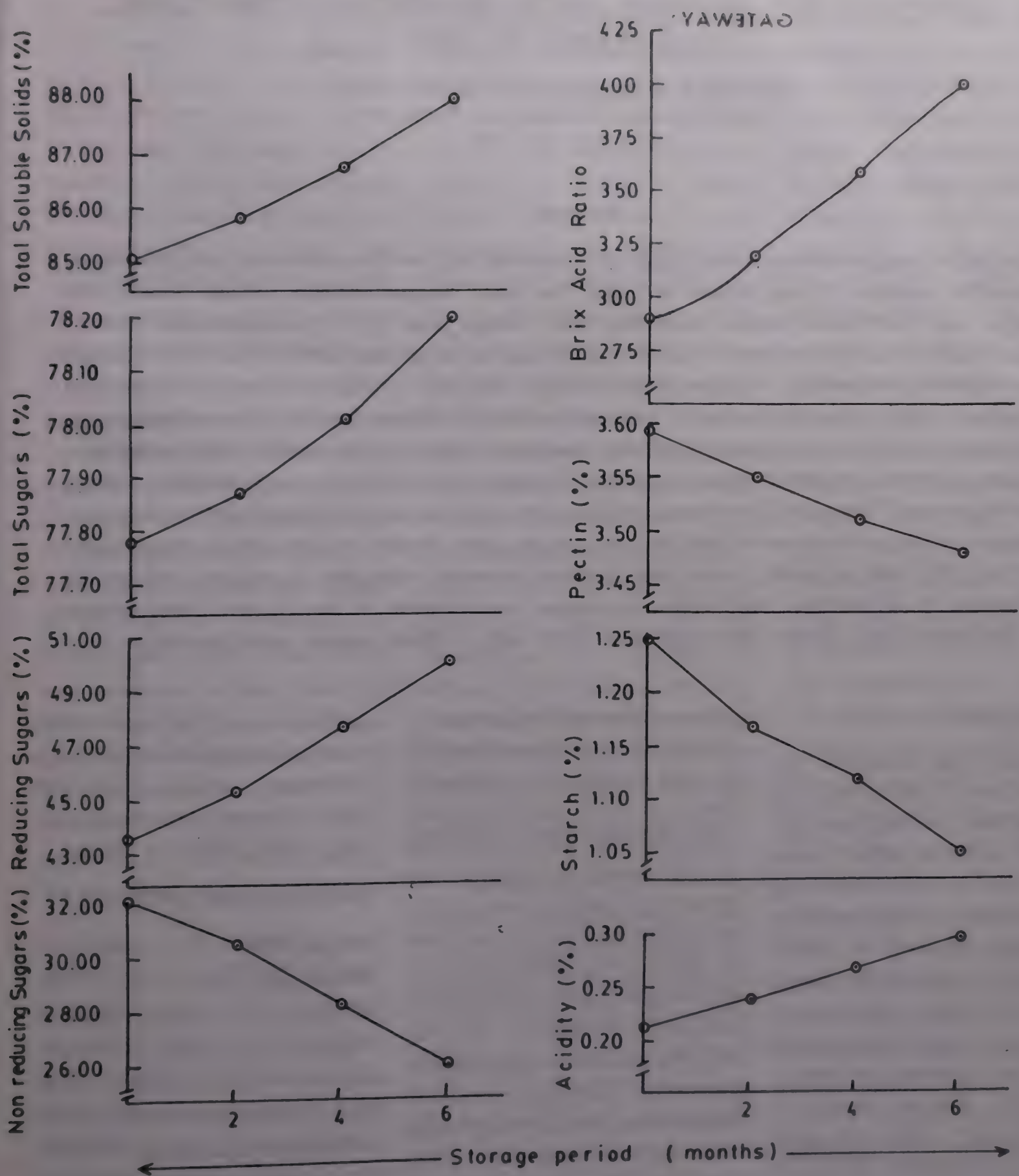


Fig. 1 Effect of storage periods on the physico - chemical parametes of apple pomace toffees

IMPROVED BEVERAGES FROM MANGOES WITH POOR COLOURED FLESH

S.K. Kalra, D.K.Tandon and Neelima Garg
Central Institute for Subtropical Horticulture,
Lucknow -227 107

ABSTRACT

Some of the mango varieties having high yield potential may not be preferred by the processing industries because of poor colour of pulp. Two such mango cultivars, *Babli Ponesa* and *Banganpalli*, were either blended with *Dashehari* mango pulp (1:1) or supplemented with 75 ppm of artificial colour mixture of sunset yellow and lemon yellow (40:60). The RTS beverage was prepared containing 15 percent pulp, 15° Brix TSS and 0.3 percent titratable acidity and preserved in 200ml glass bottles under room temperature conditions (38-12°C). Bimonthly analysis of the beverage did not show any significant changes in TSS, titratable acidity, total carotenoids or non-enzymatic browning. There was slight increase in viscosity in the beverage during 6 months storage. There was a declining trend in colour but the sensory quality of the beverages indicated better performance of *Babli Ponesa* and its colour blends as compared to *Banganpalli*. The microbial load of yeast, mould and bacteria remained negligible throughout the period of storage for six months. The blended beverages were superior to that of pure *Babli Ponesa* or *Banganpalli* and similar advantage was there with artificial colour supplementation.

INTRODUCTION

Blended fruit beverages are popular market brand drinks. The main objective of blending a beverage could be either to utilize lesser known fruits or to improve the nutritional quality and appearance of the product. Kalra et al. (1991) prepared a beverage from the mango pulp blended with 25-33 per cent papaya pulp and observed that the final product contained higher vitamin C. Similarly blended squash of pineapple with mango had good consumer acceptability (Begun et al., 1983). Srivastava (1998) mixed the pulps from two mango varieties (*Banganpalli* and *Dashehari*) and claimed improved RTS drinks as compared to that made from original

cultivars. Several non-commercial mango varieties have been identified for their potential for processing (Iyer et al., 1991 and Yadav et al. 1987) but these are not cultivated on a commercial scale due to lack of market or industrial demand. So, the processing industry may have to enter into contract farming to get consistent quality raw material. However, sometimes, due to blending, interaction of anthocyanin pigments, tannins or other components of fruits may cause browning, turbidity and other blemishes (Spayd et al., 1984). Under such conditions, improvement in the market quality of fruit beverages may be obtained by supplementation with limited edible

artificial colours. The present study describes observations on the mango beverages supplemented with artificial colours as well as blended with superior variety of mango..

MATERIALS AND METHODS

Mango fruits of *Dashehari*, *Banganpalli* and *Babli Ponesa*, obtained from the germplasm collection of the Institute's Experimental Farm, were subjected to dip treatment of 500 ppm ethrel in hot water (52±2°C) for five minutes for optimum colour development. The fruits were drained, air dried and stored under ambient conditions (30-35°C & 70-95% RH) for ripening after packing in wooden boxes lined

with newspapers. The fruits ripened in 5-6 days. The pulp extracted from the fruits was homogenized with 20 per cent water and utilized for preparation of beverages. Pure or the stored pulp from *Babli Ponesa* and *Banganpalli* was blended with *Dashehari* puree in 1:1 ratio. The beverages were prepared containing 15 per cent pulp, 15° Brix and 0.3 per cent titratable acidity. The colour was supplemented with 75 ppm level of mixture of lemon yellow: sunset yellow (60:40). The colour mixture was earlier standardized in our laboratory on *Dashehari* beverage which did not affect its flavour or taste. The beverage was then brought to boil, filled hot into presterilized 200ml capacity bottles, crown corked and pasteurised in boiling water for 15 minutes. The physico-chemical analysis and sensory evaluation of the beverages were carried out at bimonthly intervals up to six months of storage at ambient temperature (38 to 10°C).

Brix of the beverage was determined with the hand refractometer (Erma, Japan). For acidity, 10 ml sample was titrated with standard 0.1N NaOH solution using phenolphthalein as indicator and acidity was calculated as anhydrous citric acid. Total carotenoids were estimated by the method described by Kalra and Tandon (1996). Two gram mango puree was extracted twice with 15ml acetone fraction and then 15ml of petroleum ether.

The nonaqueous fraction was washed twice with 10 ml portion of 2% NaCl solution, volume made up to 50ml and read at 452 nm. The non-enzymatic browning was determined according to Ranganna (1986). Viscosity was assessed by the Brookfield digital viscometer. Organoleptic evaluation was done by 7 semi skilled judges on the basis of colour, flavour and taste on a 10 point scale for each character. For yeast, mould and bacterial counts, one ml of properly diluted sample was plated on Rose Bengal Chloramphenicol Agar and Nutrient Agar, respectively (Collin and Lyne, 1985). The plates were incubated at 35±2°C for 72 hrs and the observations were recorded as number of colony forming units (CFU/ml) for yeasts and moulds while for bacteria, it was cells per ml. The counts were averaged for six plates.

RESULTS AND DISCUSSION

There are large number of mango varieties cultivated in India but only a very few are utilized for processing. There may be multiple reasons for this limitation as most of the mango cultivars may have lower yields or edible pulp percentage while others may have poor pigmentation or other unfavorable quality characteristics. *Babli Ponesa* exhibited good physico-chemical characteristics except for poor colour, somewhat comparable to *Banganpalli* (Table 1.) Both varieties were used for preparation of improved beverages

either by blending with *Dashehari* having good pulp colour or by addition of colour. The beverages so prepared were analyzed until six months of storage. The adjusted TSS of 15° Brix and 0.3 percent titratable acidity of the beverages did not change much during storage for 6 months. The viscosity of *Babli Ponesa* was approximately 15 centipoise as compared to a little over 5 centipoise of *Banganpalli* (Table 2). The viscosity value in all the beverage samples increased after 6 months of storage. The enzymatic browning exhibited little change during six months storage (Table 2). Total carotenoids remained stable and similar observations were reported by Srivastava (1998) in *Dashehari* and *Banganpalli* RTS beverages. The organoleptic quality of the beverages was assessed in three sensory parameters i.e. appearance/colour, flavour and taste by a panel of semiskilled judges. There was general decline in the sensory evaluation scores but the original colour of the fruit beverage was quite stable (Table 3) which is in conformity with the earlier findings (Srivastava, 1998). The colour of *Babli Ponesa* beverage was originally very low but that of its blend with *Dashehari* and artificial colour improved to 7 and 9, respectively, although both declined gradually and ended up much higher even after 6 months of storage. The beverage had better appearance with added artificial colour upto 4 months,

while after 6 months, the colour intensity was at par with that of the *Dashehari* blend. Moreover, the colour adjunction improved the flavour and taste perception contributing significantly to the overall sensory score of the mango beverage. This is in contrast to the colour addition observed in the commercially available mango drink M3, that was suspected to the fluorescent in nature and disappeared fast (Kalra et al., 1991). The exact nature of the fluorescent colour was not determined. The average flavour score of pure beverage of *Babli Pones* declined more as compared to that of its blends mainly due to their better appearance during six months of storage. Likewise, the flavour and taste scores of pure *Banganpalli* beverage dropped more rapidly than its blends with *Dashehari* and added colour because of their better colour perception. It is evident from the observation that blends of both the mango varieties i.e., *Babli Pones* and *Banganpalli*, performed better and were more acceptable during the entire period of their preservation. The deterioration of pure *Dashehari* beverage was similar to that of other

beverages of the two cultivars but other workers have reported stable RTS from *Banganpalli* and *Dashehari* (Srivastava, 1998). The microbial load of yeast, mould and bacterial counts in different samples of beverages during six months of storage were negligible (Table 4). Minor variations observed during storage might be due to sampling error rather than any real changes. However, microbial load at any stage was much lower than acceptable limits. There was no apparent spoilage in any of the beverage bottles.

So, it may be inferred that blending of cultivars having poor appearance or other inferior quality traits could be a useful proposition. The beverages prepared from such varieties could be improved by blending with colour or with fruits of better quality characteristics for economical production and boosting their marketing demand.

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Table 1 : Physico-chemical characteristics of mango varieties

Name of variety	Av.Wt. of fruit	Pulp (%)	Firmness (kg)	TSS (°Brix)	Titrateable acidity as anhydrous citric acid (%)	Vit.C (%)	Total carotenoids	Viscosity (centipois) anhydrous
<i>Babli Ponesa</i>	415	70	0.56	18.5	0.66	19.0	0.50	1780
<i>Banganpalli</i>	376	72	0.64	19.1	0.21	33.3	0.88	3000
<i>Dashehari</i>	174	70	0.75	21.0	0.22	21.0	3.85	1400

Table 2 : Some rheological and colour characteristics of RTS mango beverages

Treatment	NEB % Transmission		Total Carotenoids (mg%) Months of storage		Viscosity (Centipois)	
	0	6	0	6	0	6
<i>Babli Ponesa</i> (BP)	97.5	97.5	0.05	0.08	14.4	18.3
BP + <i>Dashehari</i> (1:1)	96.5	95.5	0.22	0.27	14.3	17.4
BP + colour	49.0	47.0	0.05	0.08	15.5	18.4
<i>Banganpalli</i> (BG)	97.0	96.0	0.11	0.13	5.4	7.7
BG + <i>Dashehari</i> (1:1)	94.5	93.5	0.25	0.29	5.6	8.6
BG + Colour	46.0	46.0	0.11	0.12	5.4	8.4
<i>Dashehari</i>	99.5	98.0	0.27	0.33	7.4	7.5

Table 3 : Sensory evaluation of RTS beverages of mango

Treatments	Appearance				Flavour				Taste				Av. score
					Months of storage								
	0	2	4	6	0	2	4	6	0	2	4	6	
Babli Ponesa	3.0	3.0	3.0	3.0	7.5	6.0	4.0	4.0	8.0	6.5	5.0	5.0	4.8
Babli Ponesa+ Dashehari	7.0	6.5	5.5	5.5	7.5	6.5	6.0	5.0	7.5	7.0	6.5	5.5	6.3
Babli Ponesa+ Colour	9.0	8.0	6.5	5.5	7.5	7.0	5.5	5.5	8.0	6.5	6.0	6.0	6.8
Banganpalli	4.0	4.0	5.0	4.5	6.5	4.0	3.5	3.5	6.5	5.5	5.0	5.0	4.8
Banganpalli+ Dashehari	7.0	7.0	6.5	6.0	7.5	6.0	5.0	4.5	8.0	6.5	5.5	5.0	6.0
Banganpalli+ Colour	9.0	7.0	5.5	5.5	8.0	6.0	5.0	5.0	8.0	7.0	5.0	5.5	6.4
Dashehari	7.5	6.5	6.0	5.5	7.0	6.5	5.0	4.5	7.5	7.0	6.0	4.5	6.1
Score : out of 10 points													

Score : out of 10 points

Table 4 : Microbial quality of mango blended beverages during storage.

Treatments	Yeasts and Moulds (CFU ml ⁻¹)					Bacteria (Cells ml ⁻¹)		
	Months of storage							
<i>Babli Ponesa</i>	Nil	0.05x10 ¹	0.2x10 ¹	0.2x10 ¹	Nil	NII	NII	Nil
<i>BP+Dashehari</i>	NII	Nil	0.06x10 ¹	0.04x10 ¹	0.03x10 ¹	NII	NII	Nil
<i>BP+Colour</i>	Nil	0.03x10 ¹	0.1x10 ¹	0.03x10 ¹	0.05x10 ¹	NII	NII	Nil
<i>Banganpalli (BG)</i>	0.3x10 ¹	0.03x10 ¹	0.05x10 ¹	0.03x10 ¹	0.06x10 ¹	NII	NII	Nil
<i>BG+Dashehari</i>	0.2x10 ¹	0.05x10 ¹	0.03x10 ¹	0.06x10 ¹	0.1x10 ¹	NII	NII	Nil
<i>BG-Colour</i>	0.2x10 ¹	0.3x10 ¹	0.3x10 ¹	0.06x10 ¹	2.3x10 ¹	NII	NII	Nil
<i>Dashehari</i>	0.3x10 ¹	0.5x10 ¹	0.5x10 ¹	0.3x10 ¹	1.5x10 ¹	NII	NII	Nil

TEA PREPARATION METHODS AND ADSORPTION OF MILK CALCIUM

P.M Mamatha and Jamuna Prakash

*Department of Studies in Food Science and Nutrition, University of Mysore
Manasagangotri, Mysore 570006*

ABSTRACT

The calcium content of tea prepared by different methods was estimated to determine the adsorption of milk calcium by tea. Four types of tea samples (two leaves and two dust) and four different sources of milk (dairy milk, whole milk powder, skim milk powder and dairy whitener) served as variables. The preparation methods chosen were (1) milk added to brewed and filtered tea decoction (2) milk added before brewing and (3) tea prepared using only milk. The brewing time chosen were 0,1,2 and 3 min. Tannin content of tea samples and calcium content of all the milk and tea samples used for the study were estimated. The calcium contents of milk samples were 117 mg/100ml for dairy milk and ranged from 712-1280 mg/100g and 23.2-28.2g/100g respectively. The percent retention of calcium in tea samples prepared with dairy milk ranged from 42-92%, with whole milk powder 42-83%, with skimmed milk powder 48-88% and with dairy whitener 45-91%. Among tea preparation methods, the second method retained least amount of calcium ranging from 45-70%. Tea prepared with only milk retained highest amount of calcium ranging from 63-92%. The adsorption of calcium was more as the brewing time increased from 0-3 minutes in all samples. It can be concluded that the method of preparing tea, source of milk and tea and brewing time influenced the calcium retention in prepared tea. Though the absolute amount of calcium which was retained by tea is small, it can be of advantage in habitual tea drinkers for whom the milk consumed in the form of tea is the only source of calcium

INTRODUCTION

Tea is one amongst the many popular beverages consumed around the world. Tea contains many useful components in the leaves including caffeine, tannins, amino acids, minerals and vitamins. It is a mild stimulant and considered as a refreshing drink. Tea is divided into three classes namely, fermented or black, unfermented or green and semi fermented or oolong. In India black tea is generally consumed with milk. Tea contains condensed

tannins formed by polymerization of catechins and leucoanthocyanins. Tannins are responsible for the colour of tea infusion and for the stringent taste of the tea (Swaminathan, 1987). Tannins are known to bind minerals. Since the tea leaves are rich in tannins, they may bind milk calcium making it unavailable. However the extent of calcium bound may differ depending upon the tannin content, calcium content and tea preparation methods. Calcium as a mineral has assumed importance lately due to its role in bone health

of elderly. Although for Indians recommended dietary allowance per day is 400mg, a much higher quantity is recommended by other population groups due to its beneficial role in preventing osteoporosis, a disease affecting elderly causing softening of bones and high susceptibility to fractures. Although India is the second largest producer of milk, the milk consumption differs to a large extent in different sections. Diets of the people from low socio-economic group may not contain milk at all

or it may be taken only in the form of tea which is a very popular drink. With this background the present investigation was planned to determine the calcium content of tea prepared by different methods using two brands of tea leaves or tea dust and four different sources of milk.

MATERIALS AND METHODS

Materials : The study was conducted using tea leaves and dust from two different brands (Brand 'A' and 'B') and four sources of milk, namely dairy milk supplied by Govt. dairy, whole milk powder, skim milk powder and dairy whitener available commercially. For preparation of samples as well as reconstitution of milk and for all analysis, double distilled glass water was used. Reconstitution of milk powder was done according to the instruction given on the package. All the chemicals used were of analytical grade.

Tea preparation methods : Different types of tea preparation methods were used to study the effect on calcium adsorption.

Method 1: 1.5g of tea leaves/tea dust was added to 100ml of demineralized boiling water, brewed, filtered and volume of brew was measured. To this brew 10 ml of milk was added.

Method 2: 100 ml of water and 10 ml of milk was boiled together. To this 1.5g of tea leaves/tea dust

was added, brewed, filtered and volume was measured.

Method 3: This method used only milk for preparation of tea. 1.5g of tea leaves /tea dust was added to 110 ml of boiling milk, brewed, filtered and volume was noted.

Each of the above methods mentioned included different brewing time of 0,1,2 and 3 min after addition of tea leaves/tea dust. After the designated time, the brew was filtered and used for calcium analysis.

Analysis : Aliquots of tea brew were taken for estimation of calcium by Clark and Collip method as modified by Kramer-Tisdall (Oser, 1965). The calcium content of tea leaves and tea dust samples used for the study were also estimated (Ranganna, 1997). Spent tea leaves samples obtained from method 3 (prepared only with milk using skim milk powder with different brewing time) were also used for estimation of calcium to know the extent of calcium adsorbed by the tea leaves after filtration. Calcium content of all the milk samples used for the study was also estimated by titration method on the day of the experiment. All the analyses were carried out in duplicate samples using double glass distilled water. The total tannin content of two brands of leaves and dust were estimated by using acidified vanillin reagent with catechin as standard and the absorbance was measured at 550 nm (AOAC,

1984)

RESULTS AND DISCUSSION

The results of the study are presented in Tables 1-6. Table 1 gives calcium content of milk and tea samples used for the study. As can be seen, dairy milk contained 117 mg of calcium per 100ml. It is similar to the value reported by Gopalan et al. (1996). Whole milk powder and skim milk powder contained 942 and 1280 mg of calcium per 100g respectively. Dairy whitener which consisted of partially skim milk and sucrose contained 712 mg of calcium per 100g. The samples of tea powder also contained high amount of calcium ranging from 352-529 mg per 100g. Of the two brands tested, leaves seem to have more of calcium in comparison to dust samples.

The tannin contents were found to be in range of 23.2-28.2g per 100g of tea powder. Tea dust had a slightly higher amount than tea leaves. Contents of total catechins of tea shoots of different clones were reported to be in the range of 16.9-21.4 per 100g by Thanaraj and Sheshadri (1990). The amount of tannin present in tea may be important from physiological point of view since it interferes with adsorption of minerals.

The calcium content of tea prepared with dairy milk is presented in Table 2. When milk is added to

brewed and filtered tea decoction, there is not much variation in the amount of calcium retained in the tea. At 0 min of brewing time, the calcium retained was 63.8% compared with 67.5% after 3 min. Since the tea decoction is already filtered, the brewing time does not seem to affect the calcium adsorbed by the tannin. On the contrary in the second method of preparing tea where milk was added during preparation itself, it can be seen that as the brewing time increased there was a decrease in percentage of calcium retained. At 0 min of brewing time, 62.7% of calcium was retained but at 3 min brewing time only 49.2% could be retained. This indicated that the adsorption of calcium by tea leaves was a time dependent phenomenon wherein increase in the contact time between tea leaves and calcium favoured a higher adsorption.

An entirely different response was observed when tea was prepared only with milk. It may be noted that the calcium content of milk alone is very high and hence the overall percentage retention in tea becomes higher. Since the ability of tannins or oxalates to adsorb calcium will also depend upon the ratio of such substances to calcium, the difference is the same. Moreover it may also be noted that with the high calcium content the brewing time does not become a factor to influence the adsorption of calcium

by tea leaves as was seen in the second method of preparation of tea. In tea samples prepared with tea leaves of brand 'B', the calcium retained at 0 time of brewing was 65.3% but at 1 min it exhibited the value of 72.4% which progressively decreased to 55.6% on increasing the brewing time in the 2nd method of preparing tea. A higher calcium was retained at 0 min which decreased to 46% at 3 min of brewing. Tea prepared with milk showed a trend of decreasing calcium content with increasing brewing time, although the differences were smaller. Tea prepared with tea dust (brand A) also showed a similar result as found with leaves samples. In filtered tea decoctions the calcium retention ranged from 62.7-71.8% at different brewing times. In tea prepared with milk and water the retention of calcium was higher at 0 time (60.1%) and it gradually reduced to 54.9% at 1 min. and 45.9% at 3 min of brewing time. Tea prepared with only milk exhibited a very high retention which could be because of a higher milk calcium as explained earlier. The tea prepared with tea dust from brand B showed a similar trend of calcium retention. Both 1st and 2nd method of preparing tea exhibited a dependence on brewing time. A lesser calcium content was found in samples brewed for a longer time. The same effect was also seen in tea samples prepared with milk

alone although the extent of differences were smaller.

Table 3 presents the results of tea samples prepared by reconstituting whole milk powder. In the 1st method of preparing tea which is more conventional, slight differences in calcium content of tea were noted which were brewed for a different time. On preparing the tea with milk, at 0 time of brewing, tea had 11.8 mg of calcium which reduced progressively to 10.9 mg, 10.7 mg and 9.8 mg on increasing every min of brewing time. This corresponds to a decrease from, 79.9% to 66.3%. In the last variation of preparation of tea the extent of adsorption was in the range of 11.8-16.2%. On using different brand of tea the extent of adsorption was in the range of 11.8-16.2%. On using different brand of tea leaves, a higher calcium retention could be seen in all samples. It ranges from 16.9-15.3 mg % for 1st method, 52.0-76.6% in 2nd method and 70.1-75.7% in 3rd method. Similar pattern was observed on using tea dust from brand 'B'. Here also values ranged from 70-73% in 1st method, 42-52% in 2nd method and 67-75% in 3rd method.

On using skim milk powder for preparation of different types of tea samples, the results were as follows (Table 4) : - when milk was added to filtered tea decoction 71.5-78.5% of calcium could be accounted in

prepared tea. On preparing the tea with milk the percent retention was initially 72.2 and progressively decreased to 67.5, 63.0 and 58.7% on increasing the brewing time by 1 min in each sample respectively. In tea samples prepared with milk the retention was high ranging from 86-88% due to higher content of calcium.

On using a different brand of tea leaves while the pattern of retention was similar in the 1st and 2nd methods of preparation of tea, the percent calcium retained was low. When the tea was prepared only with milk, this sample showed a dependence on brewing time quite unlike observed in other samples. The initial value of 81.4% (0 min) decreased to 75.9% (1 min), 69.1% (2 min) and 62.9% (3 min). With tea dust, in the 1st method of preparing tea, a slight reduction in calcium content was observed when tea was allowed to brew for a longer time. In the 2nd method of preparing tea, a progressive decline in the calcium content was observed as the brewing time increased. In the 3rd method a higher retention and almost similar values were obtained as was observed in other tea leaves samples. The tea dust from brand B exhibited a higher retention of calcium in comparison with tea dust from brand A. Here the values ranged from 77.6-93.9% for the 1st method, 70.2-82.9% for the 2nd method and 86.8-90.3% for the 3rd

method.

Table 5 gives the calcium content of tea prepared with Dairy whitener. The percent calcium retention with tea leaves of brand A in 1st method ranged from 60.4-67.55 while in the 2nd method of preparation it went down to 45%. In the 3rd method as with other samples, percent retention was much higher. The pattern of retention was similar as seen in other samples. On using tea leaves from brand 'B' the results indicate a similar pattern of retention although there are slight reduction in absolute values of calcium estimated. In the 1st method of preparation the calcium retained was 52.6-61%, in the 2nd method it was 66.9% and decreased to 48.8%, in the 3rd method it ranged from 77.5-82.9%. On using tea dust the calcium values indicate a higher retention in comparison with tea leaves. Tea prepared with brand A tea dust exhibited 76.1-85.5% retention in filtered tea method, 64.1-74.1% in tea prepared with water and milk and 70.7-83.6% in tea prepared only with milk. On using tea dust from brand B a slight reduction in calcium in 1st method was seen. The extent of reduction was higher in 2nd method (48.1-72.6%); however, in the 3rd method retention was much higher ranging from 90.9-93.4%.

Since the study was designed to explore the extent of calcium

adsorbed by tea leaves during preparation of tea, it was thought worthwhile to estimate the calcium content of spent tea leaves to determine the extent of adsorption. It may be noted here that the tea leaves themselves are rich in calcium as was found by determining their calcium content (Table 1). Hence the used tea leaves will have inherent calcium as well as calcium absorbed from milk. The calcium content of two varieties of tea leaves ranged from 415-580mg per 100g of leaves as reported by Natesan and Ranganathan (1990). They also reported that 3.2-4.0 mg and 4.2-5.6 mg of calcium/g of tea leaves were leached out in black tea infusions at 1 min and 5 min of brewing respectively.

For this experiment the tea samples prepared using skim milk powder and tea leaves from two brands were used. The used tea leaves were dried, ashed in a muffle furnace and used for calcium determination. As can be seen from Table 6, there is an increase in calcium content of spent tea leaves when compared to original amount present in 1.5g of tea leaves (the value was 6.23 mg for brand A and 7.9 mg for brand B leaves). It can also be seen that as the brewing time is more the calcium content also increases thereby very clearly indicating the absorption of calcium by tea leaves as well as time dependence of absorption. The overall

analysis of data indicated that the calcium content of tea is influenced by many factors. The method of preparation of tea obviously seems to affect the calcium retention wherein filtration of tea decoction and then addition of milk resulted in lesser binding of calcium by tannin. Brewing time of tea was directly correlated to the calcium adsorption by tannin. Higher the brewing time, more was the adsorption of calcium. The extent of calcium retention also exhibited a dose dependent reaction wherein a very high amount of calcium could reduce the extent of percent adsorption. This was seen when tea was prepared using only milk. With such high content of calcium the brewing time dependence was not

observed.

Although the study shows a very definite adsorption of calcium by tea, this may not be of practical significance from nutritional point of view since the absolute amount of calcium which was retained by tea was very small. However this may be of concern in habitual tea drinkers who may drink 8-10 cups of tea per day and for whom the milk consumed in the form of tea may be the only source of calcium.

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Table 1. Calcium and Tannin contents of samples

Milk samples	Calcium (mg/100g)	Tea samples	Calcium (mg/100g)	Tannin (g/100g)
Dairy milk	117	Tea leaves (A)	408	23.2
Whole milk powder	942	Tea dust (A)	352	25.0
Skim milk powder	1280	Tea leaves (B)	529	26.4
Dairy whitener	712	Tea dust (B)	466	28.2

Table 2. Percent retention of calcium in tea prepared with dairy milk

Preparation method	Total calcium(mg)	Brewing time (min)			
		0	1	2	3
Tea leaves (A)					
1	19.0	63.8	68.0	66.1	67.5
2	19.0	62.7	61.7	57.4	49.2
3.	149.0	84.0	85.5	85.2	82.3
Tea leaves (B)					
1	16.7	65.3	72.4	59.5	55.6
2.	16.7	61.7	53.2	47.8	46.1
3.	174.4	67.7	66.2	63.3	62.1
Tea dust (A)					
1	17.0	68.0	71.8	62.7	64.0
2.	17.0	60.1	54.9	53.0	45.9
3.	125.0	90.9	90.6	86.9	84.5
Tea dust (B)					
1.	16.7	62.7	71.6	57.0	50.5
2	16.7	65.5	54.8	50.0	46.8
3.	174.4	70.1	69.7	67.5	66.3

Table 3. Percent retention of calcium in tea prepared with whole milk powder

Preparation	Total	Brewing time (min)			
method	calcium(mg)	0	1	2	3.
Tea leaves (A)					
1.	16.3	91.3	94.2	83.1	70.6
2.	16.3	79.9	73.5	71.2	66.3
3.	178.3	86.4	88.2	86.2	83.8
Tea leaves (B)					
1.	20.4	89.4	91.7	88.9	82.6
2.	20.4	84.6	78.9	74.8	66.6
3.	232.0	84.2	83.8	74.1	73.0
Tea dust (A)					
1.	21.7	78.8	80.1	78.2	73.9
2.	21.7	76.6	67.6	54.7	52.0
3.	186.0	74.0	75.7	71.4	70.1
Tea dust (B)					
1.	24.8	72.6	73.4	71.4	69.8
2.	24.8	52.3	49.9	43.5	41.9
3.	203.2	75.0	71.7	66.7	66.5

Table 4. Percent retention of calcium in tea prepared with skim milk powder

Preparation method	Total calcium(mg)	Brewing time (min)			
		0	1	2	3.
Tea leaves (A)					
1.	27.5	73.8	78.5	72.3	71.5
2.	27.5	72.2	67.5	63.0	58.7
3.	240.4	86.0	88.2	88.0	86.1
Tea leaves (B)					
1.	32.7	67.5	69.0	63.3	61.2
2.	32.7	61.2	56.1	49.9	47.5
3.	280.7	81.4	75.9	69.1	62.9
Tea dust (A)					
1.	28.0	77.3	78.8	76.5	71.9
2.	28.0	59.6	56.7	55.0	52.5
3.	232.0	91.8	89.1	88.9	87.6
Tea dust (B)					
1.	35.3	81.2	93.9	88.4	77.6
2.	35.3	82.9	79.2	70.9	70.2
3.	318.0	90.3	89.3	87.8	86.8

Table 5. Percent retention of calcium in tea prepared with Dairy whitener

Table 5. Percent retention of calcium in tea prepared with Dally white tea.					
Preparation method	Total calcium(mg)	Brewing time (min)			
		0	1	2	3.
Tea leaves (A)					
1.	16.9	63.9	67.5	60.4	61.3
2.	16.9	64.1	57.9	52.3	45.2
3.	125.3	88.3	92.4	91.6	91.4
Tea leaves (B)					
1.	22.6	60.7	61.0	55.3	52.6
2.	22.6	66.9	56.9	54.2	48.8
3.	169.1	82.9	81.2	80.1	77.5
Tea dust (A)					
1.	16.5	82.0	85.5	83.5	76.1
2.	16.5	74.1	72.3	68.7	64.1
3.	129.0	83.6	79.6	74.6	70.7
Tea dust (B)					
1.	21.2	66.6	72.8	63.8	59.2
2.	21.2	72.6	56.0	49.4	48.1
3.	163.2	93.4	92.0	92.5	90.9

Table 6. Calcium content (in mg) of spent tea leaves

Tea sample	Brewing time (min)			
	0	1	2	3
Tea leaves (A) 1.5g+SMP	19.6	20.4	21.3	22.8
Tea leaves (B) 1.5g+SMP	18.7	20.1	23.6	24.4

SMP : Skim milk powder.

EFFECT OF DRYING AIR TEMPERATURES AND STANDARD PRETREATMENTS ON THE QUALITY OF FLUIDIZED BED DRIED BUTTON MUSHROOM (*Agaricus bisporus*)

Sudhir Kumar Singh*, Maharaj Narain and B.K.Kumbhar

Department of Process and Food Engineering,
G.B.Pant University of Agriculture and Technology
Pantnagar - 263145, India

ABSTRACT

Dehydration of button mushroom poses discolouration and poor dehydration characteristics of dehydrated product. To overcome the problems button mushrooms were given different treatments such as blanching, soaking in 0.5% KMS; soaking in 1% KMS, 0.2% citric acid, 6% sugar & 3% salt; soaking blanched samples in 0.5% KMS and 1% KMS, 0.2% citric acid, 6% sugar, 3% salt solution separately prior to dehydration. The pretreated materials were then dried in Fluidized Bed Dryer at different temperatures viz. 50, 60, 70, 80 and 90°C. Drying characteristics and its kinetics along with dehydration ratio have been studied. Dehydrated mushrooms were evaluated for colour, texture, flavour and overall acceptability. The quality of dehydrated mushrooms was significantly influenced by pretreatments as well as temperatures. It is found that samples soaked in 1% KMS, 0.2% citric acid, 6% sugar and 3% salt solution and dried at 50°C gave satisfactory results

INTRODUCTION

Mushrooms, an edible fungi, assume considerable importance in human diet as they are a good source of non starchy carbohydrate, protein (~4%), dietary fibre, minerals and vitamins (Bano & Rajarathanam, 1988). Fat content is quite low in mushrooms. Nutritionally mushrooms fall between high grade vegetables and low grade meats and provide about 35 Calories /100g fresh weight (Rai. 1995). Like all fresh vegetables and fruits, high perishability and seasonal availability of mushroom emphasizes the need for their preservation. Freeze drying and fluidised bed drying are the advanced techniques for preservation of such products. However, the process of

freeze drying suffers from high cost of processing and packaging. Fluidized bed drying, besides providing high quality product reduces drying time also. The time required to dry green peas by this techniques was one- fourth of that for conventional tray drying (Gangopadhyay and Chaudhary, 1979). However very little information on fluidised bed drying of mushrooms is available. The two reported investigations are of Deshpande & Tamhane, 1981 and Suguna et.al. 1995. Both have reported considerable enhancement in shelflife of dehydrated product.

It may be mentioned that pre-treatment of mushrooms before drying in one form or the other

(washing in water, potassium metabisulphite i.e. KMS or other formulations; blanching, sulphating etc.) helps in checking enzymatic browning, stabilizing colour, enhancing flavour retention and maintaining textural properties. These pretreatments have now been more or less standardized. However the effect of drying air temperature on the quality of fluidised bed dried mushrooms has not been investigated and hence the present study was undertaken.

MATERIALS AND METHODS

The study was conducted on button mushroom (*Agaricus bisporus*) as these are the most commercially grown and account for 85% of the

* Author's correspondence address Bikanerwala Foods Pvt. Ltd., A-28, Lawrence Road, New Delhi, E-mail : sksudhir@usa.net

total mushroom production in India. Fresh mushroom samples were procured from the Extension Centre of G.B. Pant University of Agriculture and Technology, Pantnagar. Mushrooms were washed in fresh tap water to remove the compost adhering on the surface.

Each washed mushroom was cut into four pieces (slice), then imparted various standard pretreatments recommended by Deshpande and Tamhane 1981, Tang, 1974, Mudahar and Bains, 1982 and Pruthi et.al 1984. These consist of (i) blanching in hot water at 96°C for three min (PT2); (ii) soaking in 0.5% KMS solution for 15 min (PT3); (iii) soaking in 1% KMS, 0.2% citric acid, 6% sugar and 3% salt solution (PT4) (iv) blanching as in (i) and soaking in 0.5% KMS solution (PT5); and (v) blanching as in (i) followed by soaking in 1% KMS, 0.2% citric acid, 6% sugar and 3% salt solution (PT6). Untreated mushroom slices formed the control (PT1). Five levels of drying air temperature (50,60,70,80,90°C) at 3.2m/sec air velocity (minimum velocity required for fluidization) were used in fluidised bed dryer. These temperatures are within the range used by Desphande & Tamhane 1981, Suguna et.al., 1995 and Uckan & Ulku 1986. The selection of the air was governed by the fact that the drying air velocity had no effect on drying rate (Uckan and Ulku 1986).

Pretreated samples as explained above were dried in a laboratory type fluidised bed dryer in batches of 250 g each. The weight of the sample was recorded at every five min. interval for first 30 min period, then after interval was increased to 15 min. Each sample was dried upto equilibrium moisture content (EMC) at particular temperature and atmospheric pressure. Samples took approximately 7, 6, 5, 4, 3 hrs at 50, 60, 70, 80, & 90°C respectively. Dried samples were cooled and packed in lip zip bag (polyethylene 100 gauge).

Moisture content of fresh mushroom sample was determined by vacuum oven method recommended Ranganna, 1986. Residual peroxidase activity after blanching was measured by peroxidase test (IS- 4624 :1968). In the absence of any standard on rehydration ratio (R.R.) for mushroom, the procedure for measurement of R.R. was standardized as per method described by Ranganna, 1986. This procedure resulted in rehydration time of 20 minutes, which was used for all the samples. For rehydration, two gram sample of dehydrated mushrooms was immersed in simmering water at 90°C and after 20 min. excess water was drained through Whatman filter paper No. 4 and the weight of rehydrated sample recorded. Rehydration Ratio was then computed by using the

equation."

$$R.R. = WR/WD$$

where WR= weight of rehydrated sample, (g)

WD= weight of dehydrated sample before rehydration, (g).

The hot air temperature was measured through a digital thermometer while the air velocity was obtained through calibration of the speed control knob provided on the dryer cabinet.

Organoleptic evaluation was carried out by a panel of ten semitrained judges of different age groups having different eating habits. Different attributes viz. colour, flavour, texture and overall acceptability were rated on the basis of 9 point hedonic scale (I.S.- 6273 :1983), ranging from 1 (most undesirable) to 9 (most desirable). Data were subjected to statistical analysis by readily available software package (State graph).

RESULTS AND DISCUSSION

The quality attributes of dehydrated mushrooms included rehydration ratio and organoleptic characteristics such as colour, flavour, texture and overall acceptability. The results for these attributes are presented in Table 1, which also indicates the effect of pretreatments and drying air temperatures on the organoleptic characteristics.

a) REHYDRATION RATIO :

Table 1 shows that control (PT1) samples at corresponding temperatures have the highest R.R. values. The next higher values were for samples soaked in 0.5% KMS solution (PT3) which were followed in descending order by blanched samples (PT2); samples soaked in 1% KMS, 0.2% citric acid, 6% sugar and 3% salt (PT4); blanched samples soaked in 1% KMS, 0.2% citric acid 6% sugar, 3% salt solution (PT6); and blanched samples soaked in 0.5% KMS solution (PT5). It may be noted that in all cases blanching considerably reduced the R.R. Further more among the chemical treatments, samples soaked in 0.5% KMS (PT3) solution had the higher R.R. than those soaked in 1% KMS, 0.2% citric acid, 6% sugar and 3% salt solution (PT4).

The above shows that the pretreatment did not improve the rehydration characteristics of the mushroom samples. In fact pretreatments resulted in lowering of R.R. values.

Through the effect of temperature and pretreatment on R.R. was found statistically significant (Table 2) but Table 1 reveals that in general R.R. decreases with increase in drying air temp. Lower values of R.R. in samples due to successive higher temperature, perhaps, reflected the irreversible textural changes caused by high temperature.

b) ORGANOLEPTIC CHARACTERISTICS

Among the pretreatments soaking in 1% KMS, 0.2% citric acid, 6% sugar & 3% salt solution (PT4) yielded dehydrated product with better colour, flavour, texture and overall acceptability. The same sample when blanched had the product closest to PT4 in organoleptic quality. These were followed by PT3, PT5, PT2 & PT1. The improvement in colour of untreated sample i.e. control (PT1) when blanched is basically because of reduction in enzymatic browning resulting in inactivation of enzymes (Polyphenol peroxidase). However blanching in most cases caused slight adverse effect on texture as reflected by texture scores. It appears that flavour is most significantly influenced by blanching. However chemical pretreatments improved flavour as well as texture. In case of acceptability, it appears that the judgement was largely influenced by the colour.

On statistical analysis of organoleptic scores, it was found that temperature and pre-treatment had significant effect on colour, flavour, texture and overall acceptability because $F_c > F_t$, table value. (Table 2).

It appears that increase in drying air temperature had adversely affected all the organoleptic characteristics of dehydrated product,

which is clearly reflected in average scores given in Table 1.

The acceptance of various combinations of drying temperatures and pretreatments was examined with respect to quality of dehydrated product using organoleptic characteristic scores, and these are given in Table 1 (*)

It is seen that fluidised bed drying could be utilized for the drying of mushroom on commercial scale. However the dehydrated product is not expected to replace the fresh mushroom as colour, flavour, and texture of dehydrated mushrooms are not at par. However the technique can be utilized where dehydrated mushroom is in demand for use in soup preparations. In view of its good quality, the combination of soaking in solution of 1% KMS, 0.2% citric acid, 6% sugar & 3% salt (PT4) and drying air temperature of 50°C is recommended for commercial use.

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Table :1 R.R. and Average Score for Organoleptic Characteristics

Treatment	Temperature °C	RR	Colour	Flavour	Texture	Overall acceptability
PT1	50	2.90	3.33	5.00	4.83	4.08
	60	2.89	3.03	4.83	4.17	3.75
	70	2.66	2.85	4.60	4.11	3.67
	80	2.60	2.65	4.50	3.83	3.60
	90	2.59	2.50	3.83	3.33	3.51
PT2	50	2.64	4.21	5.67	4.48	5.08
	60	2.51	4.00	5.00	4.08	5.00
	70	2.37	4.00	4.83	4.01	4.33
	80	2.17	3.80	4.68	3.72	4.00
	90	2.08	3.76	4.12	3.30	3.89
PT3	50	2.75	6.33	6.50	7.17	6.25
	60	2.65	5.58	6.20	6.50	5.70
	70	2.50	5.17	6.11	5.58	5.58
	80	2.41	4.83	5.82	5.17	5.08
	90	2.23	4.66	5.73	5.15	5.00
PT4	50	2.37	8.00*	7.50*	7.91*	7.67*
	60	2.36	7.76*	6.89*	7.67*	7.50*
	70	2.16	7.67*	6.72*	7.58*	7.43*
	80	2.10	7.33	6.21	7.50*	7.40
	90	2.06	7.08	5.83	7.42	7.33
PT5	50	2.32	6.00	6.67	6.17	6.17
	60	2.25	5.19	6.30	5.83	5.75
	70	2.23	5.50	6.08	5.58	5.35
	80	2.17	5.25	5.76	5.50	5.08
	90	2.12	4.91	5.10	4.90	4.93
PT6	50	2.31	7.33	7.12	7.83*	7.67*
	60	2.30	7.00	6.68	7.58*	7.50*
	70	2.28	6.41	6.32	7.17	7.41
	80	2.26	7.16	6.26	7.33	7.25
	90	2.25	7.12	5.8	7.13	7.16

Table 2. Mean scores, critical differences and Fc-values in respect of organoleptic characteristics for individual pretreatments and temperatures

Treatment	R.R	Colour	Flavour	Texture	Overall Acceptability
PT1	2.90	2.93	4.53	4.60	3.75
PT2	2.41	3.83	4.90	4.07	4.60
PT3	2.51	5.32	5.30	5.92	5.52
PT4	2.31	7.55	6.93	7.62	7.43
PT5	2.22	5.53	5.53	5.45	5.45
PT6	2.26	7.02	6.47	7.42	7.41
Fc value	13.64	46.18	15.68	30.40	49.52
C.d.at 5%	0.02	0.73	0.65	0.73	0.59

Ft at 5% - 2.21

(5,145)

Temperature °C	R.R	Colour	Flavour	Texture	Overall Acceptability
50	2.52	5.65	5.83	6.26	5.88
60	2.43	5.60	5.81	5.94	5.87
70	2.40	5.31	5.44	5.23	5.73
80	2.35	5.12	5.37	5.69	5.61
90	2.26	4.89	5.31	5.58	5.56
Fc Value	3.97	4.75	4.17	5.25	6.70
C.d at 5%	0.02	0.66	0.59	0.67	0.53

Ft at 5%- 2.37

(4,145)

GENERAL ARTICLES

WTO-FEARS AND FACTS*

As momentum builds up for the launch of a new round of multilateral trade negotiations, many Indians remain apprehensive about the political and economic impact of the World Trade Organisation (WTO) on India. But *Nripendra Misra*, special secretary, department of commerce, believes that many of these fears are misguided and India should gear up to utilize the WTO for its own benefit. He discusses the government's strategy with *Pooja Kothari*:

Earlier, India was not too keen on participating in a fresh round of WTO talks. However, the commerce ministry is now indicating India's willingness to do so. What brought about this change of heart?

The department of commerce has consistently taken the stand that the launch of any new round depends on a full convergence of views amongst the entire WTO membership on the scope and framework for such negotiations. Our more urgent task is to resolve the concerns of developing countries on implementation of the Uruguay Round agreements. We are against calls for new commitments from the developing world as a down payment for achieving symmetry and equity in the existing agreements. It is also critical that contentious 'non-trade' issues be permanently kept off the table.

We believe that the mandated negotiations and mandated reviews plus work programme for effective action on 'implementation related concerns' raised by developing countries constitute a broad enough agenda for the next ministerial

conference at Doha.

The PM has been talking about incorporating a livelihood clause and reopening the pact on agriculture. How viable is this?

Ensuring food and livelihood security is critical, particularly for a large agrarian economy like India. India's proposal in ongoing negotiations includes suggestions like allowing developing countries to maintain appropriate level of tariff bindings, commensurate with their developmental needs and the prevailing distortions in international markets. We are also seeking a separate safeguard mechanism including provision for imposition of quantitative restrictions under specified circumstances, particularly a surge in imports or decline in prices; exemptions for developing countries from obligations to provide minimum market access; exemptions of all measures taken by developing countries for poverty alleviation, rural development and rural employment.

What major issues can India push for in the new round?

Our immediate priority is that the implementation concerns raised by developing countries should be redressed urgently by correction of inherent imbalances in some of the Uruguay Round agreements, sincere and meaningful implementation of commitments undertaken by developed countries and operationalisation of all special and differential treatment clauses in the various agreements.

We also strongly favour extension of higher levels of protection to the geographical indications for products like Basmati rice, Darjeeling tea, and Alphonso mangoes at par with that provided to wines and spirits under the Trade-related Aspects of Intellectual Property Rights (TRIPS) agreement. In the TRIMS (Agreement on Trade-related Investment Measures) review we want flexibility for developing countries in evolving domestic policy while permitting foreign investment.

Will agricultural subsidies by Western countries and restrictions on free movement of labour be discussed?

All forms of trade-distorting

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subsidies in agriculture are already under discussion. In its negotiating proposal, India has demanded substantial reduction in tariffs including peaks and escalations, elimination of trade-distorting domestic support and export subsidies in developed countries.

The movement of professionals is constrained by a number of factors such as lack of specific sectorial commitments, lack of mutual recognition of qualifications, lack of transparency in administration of visa regimes, discriminatory practices in use of Economic Needs Test and social security contributions. India has, therefore, sought liberalization of movement of professionals through removal of these constraints and submitted a paper for discussion at the ongoing negotiations.

In what areas is India likely to come under pressure?

Developed countries are pushing for a comprehensive agenda like rules on investment, environment, competition policy, trade facilitation, transparency in government procurement, labour etc. They are pressing for 'mainstreaming' of environmental issues in various WTO agreements. They want establishment of a work programme in the WTO to address trade issues relating to labour standards. We are against any inclusion of non-trade issues that are directed in the long run at enforcing protectionist measures, particularly against developing countries.

How do you react to fears that Indian farmers are threatened by the WTO?

There is no adverse impact. India has bound its tariff to the extent of 100 per cent for primary agricultural products, 150 per cent for processed agricultural products and 300 per cent for edible oils. A few agricultural products had been bound historically at low levels but these bindings have been raised following the Article XXVIII negotiations held in this regard.

It has also been possible to maintain without hindrance the domestic policy instruments for promotion of agriculture or for targeted supply of food grains. Domestic policy measures like the operation of minimum support price, public distribution system as well as provision of input subsidies to agriculture have not in any way been constrained by the agreement. Certain provision in the Agreement on Agriculture (AoA) also give us flexibility to provide support for research, pest and disease control marketing and promotion, services, infrastructure development, payments for relief from natural disasters, payments under the regional assistance programme for disadvantaged regions and payments under environmental programmes.

Indian farmers now need to take advantage of the opportunity provided by the AoA, by addressing productivity issues and making their products more competitive globally.

What about fears that domestic industry will suffer and essential drugs will become unaffordable?

Indian industry has had to face greater competition in the wake of globalisation. But it has successfully

competed, as can be inferred from the fact that there has been no particular surge in imports. In fact, as per the provisional data for 2000-01 our non-oil imports declined by 14 per cent while our exports rose by over 20 per cent in the same period. A close watch is also being kept to ensure that Indian industry does not have to face unfair competition from dumped or subsidized imports.

As for drug prices, safeguards are provided like compulsory licensing, price controls, and parallel imports which should help address this concern. It must also be recognized that the prices of medicines are influenced by several factors including the level of competition, size of market, purchasing capacity etc.

The issue of affordable access to treatment for AIDS, which has gathered international attention in recent months, is hopefully a pointer in the right direction. The TRIPS agreement should not be allowed to hinder the efforts of developing countries to provide affordable access to medicines.

Is there any gameplan to help Indian industry take advantage of the greater market access provided by the WTO?

The apex organizations representing various industries are sincerely working towards ensuring a gainful transition with least pain into the global economy. The government also has to strive to improve infrastructure and provide a facilitating environment for inducing acceleration in trade.

ALL ABOUT AGREEMENT ON AGRICULTURE*

What is the Agreement on Agriculture (AoA) and how did it come about?

The extensive use of subsidy and protectionist measures by developed countries throughout the post-World War-II period led to large-scale distortions of trade in agriculture products. This adversely affected the export potential of the developing countries. The original General Agreement on Tariffs and Trade (GATT), 1947, which applied to trade in agriculture also, allowed various exceptions to rules on non-tariff measures and subsidies, accentuating these distortions.

Six years after the conclusion of the Tokyo Round of Negotiations (1973-1979), GATT member governments decided to prepare for a new round of multilateral trade negotiations. In 1986, the Uruguay Round of Trade Negotiations was launched by which time there was a broad consensus on the need to reform agricultural policies and achieve trade liberalization in the sector. Subsequent consultations culminated in the "Agreement on Agriculture" which, as it stands today, formed part of the Final Act of the Uruguay Round of Multilateral Trade Negotiations (1986-1993). Signed as part of the Uruguay Round Agreement by the member

countries in April 1994 at Marrakesh in Morocco, it came into force on January 1, 1995.

What are the provisions of AoA?

The AoA contains provisions in three broad areas of trade and agriculture policies-market access, export subsidies and domestic support. Under market access, the agreement states that there can be no restrictions on farm trade except through tariffs and all quantitative restrictions have to go. Tariffs are to be reduced by a simple average of 36 per cent over 6 years in the case of developed countries and 24 per cent over 10 years, in the case of developing countries. Domestic support measures are targeted largely at developed countries where the levels of domestic agricultural support had risen to extremely high levels. It is divided into two categories, support with no, or minimal distortive effect on trade, referred to as 'Green Box' and 'Blue Box' measures and secondly, trade distorting support (often referred to as 'Amber Box' measures).

Trade distorting domestic support is measured in terms of total aggregate measurement of support (total AMS). The AoA stipulates a reduction commitment of total AMS by 20 per cent by

developing countries in 6 years (1995-2000) and by 13.33% by developing countries in 10 years (1995-2004), taking 1986-88 as the base period. However, domestic support given to the agricultural sector up to 10 per cent of the total value of agricultural produce in developing countries and 5 per cent in developed countries is allowed. In the area of export subsidies, developed countries have to reduce, over a period of 6 years, the base period (1986-90) volume of subsidized exports by 21 per cent and the corresponding budgetary outlays for export subsidies by 36 per cent. For developing countries these reductions are 14 per cent in volume terms and 24 per cent in budgetary outlays over a period of 10 years.

What do the AoA provisions mean for India?

First, developing countries like India which had not converted their quantitative restrictions into tariffs were allowed to have ceiling bindings which were not subjected to these reduction commitments. India has also not committed to provide minimum market access opportunities - like some other countries which had converted their QRs into tariffs. India is not entitled to use the Special Safeguard Mechanism of the Agreement, which

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only 'tariff countries' can use, but it can take safeguard action under the WTO Agreement on Safeguards if there is a surge in imports causing serious injury or threat of it to domestic producers.

Secondly, India is under no obligation to reduce its level of domestic support since its product specific support is negative, while the non product specific support is well below the permissible level of 10 per cent of the value of agricultural output. Thirdly, export subsidies of the kind listed in the AoA, which attract reduction commitments, are not extended in India. Also, developing countries are free to provide certain subsidies, such as subsidizing of export marketing costs, internal and international transport, freight charges and so on.

What is the present status of WTO negotiations on agriculture?

It was decided at the time of signing of the agreement in 1994 that negotiations for further progressive liberalisation, issues and concerns arising from the existing agreement on agriculture should start from January 2000. WTO watchers feel that the negotiations are likely to continue for a few years as there are serious differences amongst the major players.

India submitted its proposals on January 15, 2001, to the WTO for the ongoing negotiations in the areas of market access, domestic support, export competition and food security. It also co-sponsored two other proposals in WTO specifically on market access in September 2000 and on export credit for agricultural products in March 2001.

What has India proposed?

India's proposals come under two major categories. The first contains measures towards increasing the flexibility enjoyed by developing countries by creation of a 'Food Security Box' for providing domestic support, ensuring food security and taking care of livelihood concerns of the agriculture sector.

The second set of demands comprise substantial and meaningful reductions in tariffs including elimination of peak tariff and tariff escalation, reductions in domestic support and elimination of export subsidies by the developed countries. Reservations by member countries with regard to Indian proposals are on the grounds that they do not contain any offer of concessions, reciprocal or otherwise, for further liberalization of agricultural trade by India.

What is the unfinished agenda?

The Uruguay Round did not bring about trade liberalization in agriculture to the desired extent. The continuation of the high domestic support to agriculture in many developed countries is a cause of concern as they encourage over-production in these countries leading to low levels of international prices. Benefits to developing countries in terms of increasing their exports will occur only after complete elimination of export subsidies and substantial reduction in domestic support in the developed countries has been effected.

Tariffs still remain very high in certain sectors, specially, in cereals, sugar and dairy products. Tariff escalation blocks exports of value-added products from developing to developed countries. Sanitary and phytosanitary measures continue to be a major barrier in diversifying exports in horticulture and meat items. Fresh commitments have, therefore, to be negotiated to substantially improve market access for products of particular interest to developing countries. Since entry of newcomers is difficult in the existing tariff quota regime, India is demanding substantial expansion of TRQs pending their eventual abolition and more transparent administration of tariff quotas.

FOOD SAFETY CONSIDERATIONS IN THE CONTEXT OF GLOBALISATION*

A.S.Aiyar

Centre for Processed Foods, Bangalore

Considerations of food safety in India, especially in relation to microbiological hazards, need a thorough understanding of the whole food system, from production to processing to distribution. The high ambient temperature and humidity prevalent in the country for the most part are conducive to microbial proliferation and the problem is further compounded by the less than satisfactory standards of hygiene and sanitation; large contribution of manual operations to handling and processing of foods; inadequacies in storage and transportation; insufficient packaging protection and others. The food legislation in the country has also not been conducive to a pro-active approach to ensuring food safety.

Any effort to augment food safety in India must reckon with the maxim, 'the chain is as strong as the weakest link'. It is equally important to remember that food safety is a societal responsibility and its achievement can only be possible with the active participation of all segments, viz., the producer, the processor, the consumer and the government.

I wish to put in perspective some of the issues involved in the quest for food safety, based on my professional experiences concerned

with different sectors of the food system.

Farm Operations

Perhaps, the greatest amount of attention that needs to be paid is to the observance of hygienic and sanitary practices in various farm operation. Inadequate consideration given to potential hazards at the farm level is often responsible for making subsequent correction of the problems unnecessarily expensive or in some cases rendering them insoluble. Some of the typical problems and the foods in which they are encountered are pesticide residues in fruits, vegetables, egg and milk; pathogens in fruits, vegetables, spices, poultry and seafood; insects in fruits, vegetables, spices; high microbial load in most fresh produce, milk, meat and poultry; mycotoxins in cereals, oilseeds and milk. Almost all these problems can be effectively overcome by adherence to good farming practices.

Processing Sector

Even in the industrial processing sectors-small, medium as well as large, appreciation of HACCP is limited to very few. The acronym is intimidatory and even when it is explained to them that a large part

of the total effort involved in implementing HACCP relates to adherence to codes of hygiene and sanitation, as well as : the observance of Good Manufacturing Practices. There are very few problems that may required involved technical expertise and /or significant financial resources. HACCP is essentially a superstructure that stands on the much wider base of hygiene, sanitation and GMP.

It would again be worthwhile to catalogue some of the common food safety issues that are prevalent in the processing units. The quality of the water used for cleaning purpose is often unacceptable, (frequently necessitated by non-availability of adequate quantity) microbiologically or otherwise. Paradoxically, at times, the produce is hygienically less acceptable after the wash than before-the importance of pH or the excessive presence of soluble organic matter to the effectiveness of chlorine are little understood. Operations involved in open retorting of hermetically sealed containers are oblivious of the importance of the ratio of the mass of the heating water to that of the product for ensuring the appropriateness of the time-temperature relationship of the thermal process. At times, based

* Reprinted from *Indian Food Industry*, Jan-Feb.2001.

on considerations of energy savings, the heating part of the pasteurisation cycle is not followed by prompt cooling, but the product is held at temperatures conducive to microbial proliferation, before it undergoes further heat processing. The regulations do not distinguish between 'high' and low' acid products in so far as their thermal processing requirements and it is not uncommon for some low-acid products to receive insufficient thermal processing. Several traditional products owe their shelf stability to the synergic effects of multiple controlling factors. The processes for these products (hurdle technologies), have essentially been developed empirically and could pose significant safety hazards in the absence of a) an understanding of the principles involved in their preservation, and b) strict adherence to the formulation and the process criteria. One of the largest categories of foods available in the market place is the whole range of dry-blended products which do not undergo any terminal process for controlling the microbial products which do not undergo any terminal process for controlling the microbial load. The microbiological qualities of the component ingredients are not specified or ascertained and the high standards of hygiene and sanitation that are essential to ensure the safety of these products are rarely adopted. The diligent application of the three cardinal principles of ensuring microbiological quality, viz., prevent the

contamination, reduce the load and retard the proliferation of micro organisms has been shown to result in remarkable benefits for several traditional dairy sweetmeats, reflected in superior sensory quality and enhanced shelf life. In all these instances, it has been possible to demonstrate that significant improvements in hygiene and sanitation can be effected and GMP adopted, without significant cost.

Food Service

With changing life styles, eating out is becoming more commonplace and with it, an increase in food-borne diseases, already the most prevalent public health problem. Activities involving the preparation of ready-to-eat food and serving them to consumers have a significant impact on overall food safety consideration in society. Apart from institutional catering and organized restaurants, the preparation and / or vending of foods in streets and similar public places (in make-shift structures or by itinerant vendors in push-carts) is a widespread activity of great socio-economic significance. This also provides an opportunity to create large scale awareness and for inculcating a culture of hygienic practices in preparing, handling and storing food. With the objective that HACCP should not remain a high-brow concept, but an easily appreciated and understood commonsense approach to mitigate the health hazards that are generally associated with street foods, a project has been initiated in a small

locality of Bangalore. The Project, funded by the WHO and sponsored by the Ministry of Health is expected to provide the basis (model) that can be replicated elsewhere. While the immediate objective is the improvement of the woefully inadequate standards of hygiene and sanitation prevalent in this activity, a greater dividend has been the attendant media coverage and the participation of the community at large.

Food Exports

The impact of food safety regulations of the importing countries on the export of even many of our traditional agro-products, is also being increasingly felt. While the blanket ban by the European union on sea-foods of Indian origin a couple of years ago sounded the first alarm bell, detentions of various consignments of shrimp, basmati, spices, etc. on account of the presence of filth, pathogens, extraneous matter and pesticide residues are reported with almost regular periodicity. There have also been non-acceptance of many different kinds of processed foods shipped by manufacturers, as well as merchant exporters, for non-compliance with regulations governing food safety. I wish to refer to some of the examples, with which I am personally acquainted, where the problems have arisen in the first place mainly on account of ignorance of the safety issues involved and the regulations governing them. These are : a) 'high acid'

foods, which by default of proper description were considered as 'acidified foods' and therefore, require a validated thermal process documentation; b) non-appreciation of the fact that a 'high acid' curry paste concentrate on dilution to a single strength product has fallen in the 'low acid' category, requiring different thermal processing; c) absence of label declaration that the product does not contain genetically modified foods or ingredients thereof; d) ignorance of the fact that mixing high - defect samples (in respect of safety standards) with low defect foods would be adulteration, regardless of the defect level of the final product; e) lack of documented information to substantiate the safety of exotic ingredients e.g. asafoetida; f) non-conformance with label requirements relating to shelf stability of the product after the container is opened and many others. It has been possible in some cases to get the food control authorities in the countries of import (USA, Saudi Arabia) accept the safety of the products on the basis of reasoned arguments, but the monetary costs of the prolonged detentions have been heavy.

Food Legislation

An important aspect of food safety that needs consideration, arises from the fact that our food laws are not fully in consonance with world-wide developments and are not conducive to promoting the preventive approach to food safety. It is an anachronism that the

concepts of good manufacturing practices (GMP), hazard analysis critical control point (HACCP) and sanitary and phytosanitary agreement (SPS), which provide the backbone to the preventive approach to food safety do not find any mention in our food laws. It is unfortunate that even the specific section [za (i) (e)] dealing with the manufacture or storage of foods under unhygienic conditions, deliberately soft-pedals the crucial issues.

Manufacture of food under insanitary conditions is not punishable per se, but only if it can be shown to be the cause of any contamination that is injurious to health. The primary measure by which the level of protection as envisaged in HACCP is achieved is the statutory requirement that food processors operate under a system that prevents the preparation, packing or holding of foods under insanitary and unhygienic conditions. The non-recognition of this crucial point in our food laws can prove to be a major road-block to our seeking 'equivalence', as provided under the SPS agreement, of our food control system.

The Prevention of Food Adulteration Rules (6&8) prescribe the minimum qualifications for the enforcement staff, viz., the food inspector and the public analyst, but the rules do not insist on any minimum technical expertise for the personnel responsible for manufacture. With safe food as a

major objective, this is a serious lacuna, one which, in my opinion, contributes significantly to food safety problems. It is interesting that while the umbrella legislation governing foods suffers from this major drawback, regulations relating to specific products or processes have provisions relating to minimum qualifications for technical personnel, e.g. the Fruit Products Order and the Atomic Energy (Control of Irradiated Foods) Rules.

Microbiological quality is often the prime concern relating to food safety; yet microbiological specifications are most conspicuous by their absence. The standards of identity for nearly 250 foods and food ingredients are provided in Appendix B of the PFA Rules and only ten of these have some semblance of microbiological quality standards. The arguments that laying down standards for some of the more perishable products, e.g. pasteurised milk would render most of the product in the market adulterated, is self-defeating and counter productive. If the intention is to achieve global standards, a beginning has to be made.

The safety of food additives is an important issue that governments and international agencies are concerned about and the country's food laws are no exception. It is strange, however, that while their use is being regulated, the term 'food additive' itself is not defined in the Prevention of Food Adulteration

Act and Rules, but only has an oblique reference (Rules 48 and 46 C).

It is heartening that the Department of Food Processing Industries, Ministry of Agriculture and the Ministry of Health are both contemplating a review of the existing food laws, particularly in the context of the safety concerns and the need for harmonization. Premier professional organizations like the Institute of Food Technologists and the international agency concerned with food quality and safety, the Codex Alimentarius Commission, have suggested guidelines which could be of value in this effort to update and modernize our food laws. Among the important guidelines are:

- Safety and public health to be the prime objective.
- Prevention fraud secondary to safety.
- Cover all components of the food system.
- Sound science and risk assessment as the basis.
- Involve scientific expertise from academia, industry, professional societies and government.

Food Irradiation

In our efforts to augment food safety, food irradiation, a versatile technique that is receiving considerable attention in recent years, could prove to be valuable. With the growing concern about the

problem of food contamination with parasites and pathogens, several petitions have been submitted to the U.S FDA for the use of radiation as an effective control measure. In a reflection of its pro-active approach and an insistence on accountability, the U.S government has included a provision in its Food and Drug Modernization Act (effective February 1998) that final determination of pending petitions be made within 60 days of enactment or provide the appropriate house or senate committee an explanation on the delay.

The Codex Alimentarius 'General Standards for Irradiated Foods' and the WTO agreement on 'Application of SPS Measures' provide the basis for wider international trade in radiation-processed foods. Based on these, irradiation could become an extremely valuable technology for achieving food safety. It is my understanding that member countries of WTO may now be challenged to defend restrictions on imported irradiated foods, within the guidelines set out in the Codex Standards, through a defensible risk assessment.

The Department of Atomic Energy has already set up one commercial irradiator as a service facility at New Bombay, primarily for sterilisation of spices and another one is coming up at Nashik to irradiate onions for sprout inhibition. It is hoped that this nonenergy-intensive technology would find wider use and contribute to improving the

safety of many different categories of foods, both for the national market and for export.

An Epilogue

While we have a right to voice our legitimate concerns in various international for a or have them taken up bilaterally without trading partners, let us not forget that 'Losers only list their problems, winners work out solutions'. The industry, government, research and development institutions, professional bodies, interested non government organisations and individuals should merge their separate interests into one unified agenda to help the country achieve internationally accepted standards of food safety and thereby reap the anticipated benefits of globalised economy. We need a time-bound framework for action with well-defined deliverables.

LAWLESS LOT

A study reveals violations by importers and highlights the mess in our food regulations. That Rugged Looking Ball of chocolate with a swirl of creamy goodness inside. That layer of rich brown sinful indulgence sandwiched between luscious round cakes. Mmmm. But hold your horses. Before you mindlessly reach out for that jar of golden honey from Britain or tuck into those tempting sausages from Denmark, remember, there's downside to this deluge of global goodies. A survey of imported packed food products just released by the Voluntary Organisation in

Interest of Consumer Education (VOICE); Delhi, finds that a majority violate Indian laws : no best before / expiry date, no declaration about the use of non-permitted colours, and worse (see box).

"The Government of India does not take sufficient steps to enforce the Prevention of Food Adulteration (PFA) Act whether it is with domestic or imported products, fumes Sri Ram Khanna of VOICE. The survey was commissioned by the Ministry of Agriculture's Department of Food Processing Industries (DPI). About time too, with the post WTO removal of quantitative restrictions (QRs) on imports, a flood of such items is expected. And while Government moves gingerly on this front the survey could startle consumers out of their stupor.

"Most Indian consumers don't bother to check labels for things like expiry dates", Bejon Misra, author of the study, contends. The result : food items past their date of use are mistakenly bought, at times consumed, making a mockery of common sense and PFA guidelines. 10 items in the survey has labels in foreign languages only. Chicken or chocolate? Open it to find out. The Health Ministry has now begun efforts to acquaint Customs officials and importers with the maze of laws governing imported food products. It also claims to be overhauling the PFA Act, though that might take a year. As usual, the Government is late off the starting block.

"We should have foreseen all this before we started removing QRs," says Parna Das Gupta, Secretary of the Confederation of Indian Food Trade and Industry (CIFTI), an arm of FICCI. "Most deliberations about WTO in the earlier years were confined to academicians, the Commerce Ministry and Intellectuals. We failed to drive home the implications to those at the operating level." Anticipating the chaos, this January CIFTI published a handbook that throws some light on the relevant laws. Currently, importers of food products in India must wade through almost a dozen laws including The Customs Act (1962), PFA Act (1954), PFA Rules (1995) and Fruit Products Order (1955) among others. "There is no dearth of rules and regulations", admits D.P. Tripathi, Secretary, Department of FPI in a moment of unwitting self deprecation. "But there is gap between what the rules are and what the implementation is".

So many of the violations unearthed by VOICE could be a result of ignorance, not insolence, Customs ignorance included. Last November, the Directorate General of Foreign Trade (DGFT) issued a notification imposing compliance of all conditions of the Standards of Weights and Measures Rules on imported products, as applicable to domestic products and made the import of 131 products subject to compliance with the Bureau of Indian Standards guidelines, again as

applicable to Indian goods. Director-General of Foreign Trade, N.L.Lakhanpal explains the need for the notification. "In a sense earlier too it was the responsibility of Customs to check according to these laws, because all our laws are supposed to be followed by imported goods, but since there were very few food products coming in it wasn't happening."

Customs passes the blame for its failure elsewhere. "In these days of liberalization, there will be a hue and cry if we do 100 per cent checking. Such a fuss is made even about the random sampling we do," says S.P.Srivastav. Chief Commissioner, Customs, Delhi zone. Sri Ram Khanna of VOICE strikes back: 'If this is their attitude, our food adulteration laws are not worth the paper they are written on.'

Another major problem is that some times senseless discrepancy between Indian and International guidelines. As a result, many products in the survey might have been following reasonable rules in their own country, but failed to make the grade in India. For instance, to reduce labelling requirements a number of countries would not ask for the date of manufacture if the expiry/best before date is given; in India, both are required. Domestic producers grumble about strictures on additives which have been proved safe worldwide. An example: artificial sweeteners are not allowed in any processed food product in India, except in aerated beverages, *pan*

masala, supari and *pan* flavouring material, "You can't wake up one morning and say, we are opening up the economy, then not provide a level playing field to domestic manufacturers," says an official spokesperson for Dabur (India). "You have to protect domestic industry also".

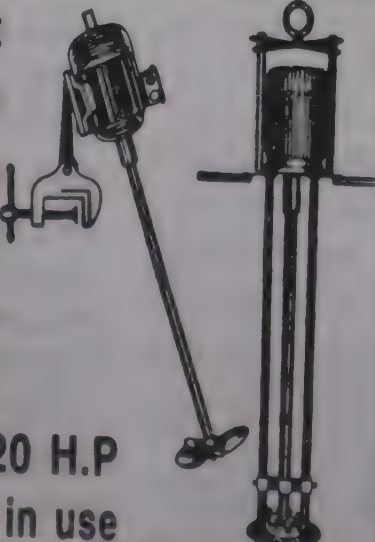
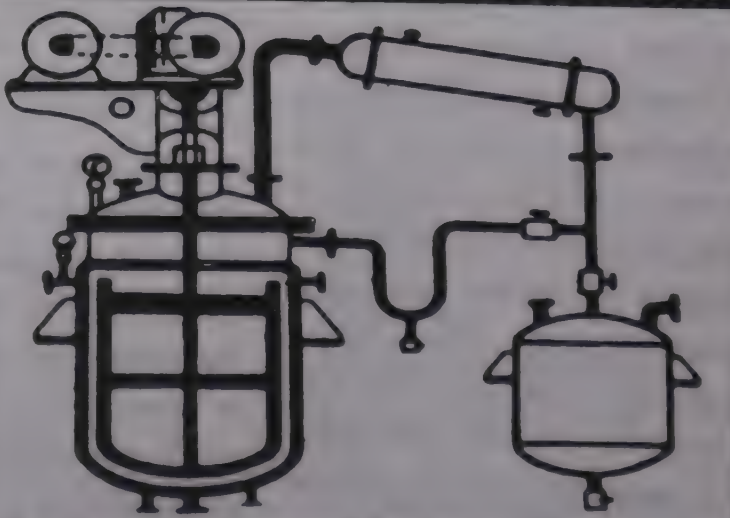
Truth be told, Indian food laws are in a mess: too many, some too strict, some too lenient. PFA Rules on pesticide residues, for one, recommend that food be tested for just over 70 pesticides. The Codex Alimentarius Commission, a FAO/WHO body which is internationally

accepted as a benchmark, prescribes testing for 197 pesticides. Quizzed about the gap, the Department of FPI's Tripathi responds lamely: "Merely following the US or Europe may not be possible for us. We have to consider the conditions prevailing in a developing country like ours".

Then there is the matter of the contradictions between Indian guidelines : the permitted lead content in tea under the PFA Act is 10 parts per million (ppm) : while under a 1991 notification of the then Ministry of Environment, Forests and Wildlife regarding a scheme for

labelling environment-friendly products with the EcoMark, only 6.5 ppm of lead has been permitted in tea since 1994.

"Industry just loves this kind of a situation," says Pritee Shah of the Consumer Education and Research Centre in Ahmedabad. "And why just focus on imported products? A large number of domestic manufacturers are also routinely short-changing the consumer." That as they say is another story. Until then before you sink your canines into those hot dogs from Holland or dip those chips into that smooth red sauce from Egypt, there's plenty to chew on.

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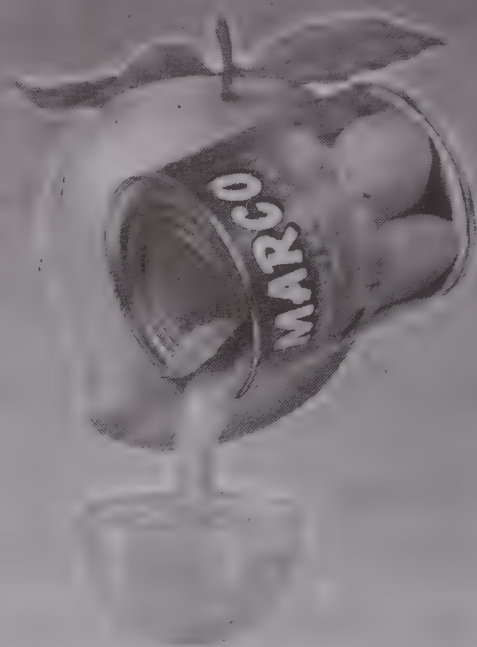
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